AMERICAN GAS ASSOCIATION MONTHLY

February 1929

Volume XI Number 2

Customers and Companies are Interested Equally in Rates

By THOMAS N. McCARTER

Smoke Fighting—Rotarian Job for Gas Men

By HENRY OBERMEYER

Changing to Natural Gas in Michigan

By ARTHUR W. STACE

Gas Leads All Fuels in 1928 Growth

By ALEXANDER FORWARD

What Is Happening in Home Ownership

By CHELSA C. SHERLOCK

What Represents Typical Use of Appliances?

By C. GEORGE SEGELER

Development of Industrial Sales and Building a Rate to Build the Business

By H. C. MEADE

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420 LEXINGTON AVENUE, NEW YORK, N. Y.

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May 6-7-8-9
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of the
Annual Convention
of the
Natural Gas Dept.
A. G. A.
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For statements and opinions contained in papers and discussions appearing herein, the Association does not hold itself responsible.

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Our Own Who's Who

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XLV

H. Leigh Whitelaw

BORN, March 11, 1888, Toronto, Ontario, Canada. Entered United States in 1891. Educated in public schools and then attended Kemper Military School, Booneville, Mo. Joined American Radiator Company in 1907. From 1907 to 1909 worked in different departments of American Radiator Co. plants at Brantford, Ontario; St. Louis, Mo.; and the Bond Plant at Buffalo, N. Y. Later part of 1909 was attached to Institute of Thermal Research of American Radiator Co.; from June, 1910 to 1913, was service engineer for the company at Chicago and St. Louis, Mo. From 1913 to 1917 was manager of the Smokeless Boiler Department. In 1917 enrolled in O.T.C., University of Toronto. Commissioned second lieutenant in 1917 Royal Flying Corps; Adjutant, School of Musketry, Royal Air Force, England, 1918. From 1920 to 1923 was sales manager of Williams Radiator Co. Since 1923 has been vice-president and general manager of American Gas Products Corporation, New York.

Has been very active in American Gas Association affairs, having served as chairman of the House Heating Committee of Commercial Section and on other important committees. Is now sectional vice-president of the A. G. A. and chairman of the Manufacturers' Section. Is also vice-president and member of Executive Committee of Gas Boiler and Furnace Manufacturers' Association.

AMERICAN GAS ASSOCIATION MONTHLY

Vol. XI FEBRUARY, 1929 No. 2

The Current of A. G. A. Progress

JANUARY was the occasion of two particularly successful meetings held by groups making up the American Gas Association. It is significant that both of these record-breaking meetings were held in the Southern territory of the country.

The first of these was the annual meeting of the Southwest Division of the Natural Gas Dept. at Shreveport, La. The other was the second annual Southern Regional Sales Conference at Atlanta, Ga.

Full accounts of these meetings are given in this issue of the MONTHLY.

FEBRUARY will likewise be marked with two important gatherings, one on the Pacific Coast and the other in Chicago. On Feb. 6-7 the A. G. A. will hold an executive conference of the Advisory Council, Executive Board, and executives at Los Angeles, Calif.

The other meeting is the Mid-West Regional Sales Conference, Hotel Sherman, Chicago, Ill., Feb. 14-15. These Mid-West sales conferences have been particularly valuable in the past, and there is every indication that the 1929 gathering will establish even higher standards.

In addition to these special meetings, there have been and there will be held the usual number of committee meetings All departments and sections of the Association have committees engaged in the year's work, and attendance at committee meetings indicates the active interest being taken by manufactured and natural gas men and by manufacturers.

STUDIES BY COMMITTEE ON UTILIZATION OF OFF-PEAK EQUIPMENT

THE Technical Section's Sub-committee on the Utilization of Off-Peak Water Gas Equipment, A. C. Fieldner, chairman, has outlined a comprehensive work schedule, covering the following three problems:

1. Review of progress in synthetic chemical processes and their relation to the utilization of off-peak water gas equipment.

2. Under what conditions would it become economic to replace oil enrichment by synthetic enrichment?

3. What processes offer promising possibilities for utilizing off-peak gas and what substitute fuels are available for off-peak periods?

CHANGES IN EXECUTIVE BOARD MEETING DATES

THERE has been some change in A. G. A. Executive Board meeting dates, as follows:

The meeting scheduled for March 13 has been changed to March 6.

The meeting scheduled for April 17 will be held on the 10th.

Both of these meetings will be in New York at A. G. A. Headquarters.

A. G. A. WILL EXHIBIT AT CERAMIC EXPOSITION

THE American Gas Association, through the Industrial Gas Section's Committee on Display and Contact with National Industrial Organizations, has arranged for a striking gas exhibit at the American Ceramic Exposition to be held at the Hotel Stevens, Chicago, Ill., Feb. 4-9.

The exhibit is being handled by H. F. Rehfeldt, of The Peoples Gas Light and Coke Co., Chicago, who has stated that the exhibit will bring to the ceramists' attention the many advantages of gas as a fuel

Members of the American Gas Association who desire tickets for the exhibition are requested to get in touch with Mr. Rehfeldt.

This exposition of the ceramic industry will be one of the largest held in recent years.

C. A. MUNROE AWARD COMMITTEE IS APPOINTED

THE Executive Board of the Association has appointed the following as members of the Charles A. Munroe Award Committee: Arthur Hewitt, Toronto, Ontario; Clifford E. Paige, Brooklyn, N. Y.; and F. C. Freeman, Providence, R. I.

Last year it was announced in the MONTHLY that Charles A. Munroe, former President of the Association, had provided for the annual

NATURAL GAS DEPT. NOW HAS PITTSBURGH OFFICE

THE American Gas Association has announced the opening of an office of the secretary of the Natural Gas Department located in Room 702, Clark Building, Pittsburgh, Pa.

The entire Headquarters Staff will, of course, continue to be at the service of the Department.

The secretary, E. J. Stephany, is visiting the natural gas producing areas of the country.

financial recognition of any individual who had made the most outstanding contribution during the year in the general interests of the gas industry.

It is presumed that contributions to the industry's advancement will include research, invention, operating methods or practices, increased sale of gas, development of new uses for gas, improved employee and public relations, promotion of safety, development of improved accounting practices, new methods of manufacture, finance, publicity, new gas works products and by-products, etc.

An award such as this bids fair to be the highest recognition the industry can give. In view of the industry's recent progress and development, the committee appointed by the Executive Board will have a hard task in deciding who is the most deserving individual.

NATURAL GAS DEPARTMENT PROCEEDINGS OUT

THE volume of proceedings of the 1928 meeting of the Natural Gas Department, at Dallas, Texas, last May, is now available, and members can secure copies for $2.50.

CONSIDER SPENDING A. G. A. EDUCATIONAL FUNDS

THE Committee on Education of Gas Company Employees, E. H. Bauer, of Worcester, Mass., chairman, has appointed representatives to serve on a joint committee with representatives of the Natural Gas Department to make recommendations as to how the A. G. A. funds for employee educational work may be used.

L. R. Dutton, Jenkintown, Pa., A. E. Forstall, New York, N. Y., and E. B. Luce, Baltimore, Md., have been appointed by the Committee.

These educational funds have been assigned to the A. G. A. by the Trustees Educational Fund, the Natural Gas Men's Supply Association, and former Vice-President C. O. G. Miller.

NEW LABORATORY APPROVAL SEAL IS DESIGNED

AT the January meeting of the Executive Board of the Association, the new design of the Testing Laboratory Approval Seal was approved. The Board referred the details of the matter back to the Laboratory Managing Committee.

A. G. A. WILL PREPARE NEW FILM ON GAS

THE Executive Board of the A. G. A. has authorized an appropriation of $12,500 for the preparation of a film on the gas industry for both employee and public showing. The Committee on Education of Gas Company Employees will handle the matter. E. H. Bauer, chairman of the committee, personally appeared before the Executive Board to ask for the necessary appropriation.

The Committee has appointed the following as members of a sub-committee on the film:

Chairman, H. O. Loebell; A. C. Rissberger, L. R. Dutton, and E. H. Bauer, ex-Officio.

The Natural Gas Department, Commercial, Publicity and Advertising, Industrial Gas, Accounting, Technical, and Manufacturers' Sections have been invited to name representatives to work with this committee.

MARKING HOLDERS

IN a letter sent by A. G. A. Headquarters to gas company members of the Association on Jan. 17, it was suggested that the A. G. A. may be in position to be of assistance in matters relating to marking, indicating, or illuminating gas holders.

ARBITRATION ACT

A COPY of draft of proposed Arbitration Act, to be submitted to the Legislatures of various states, has been sent to gas company members of the American Gas Association for consideration and comment.

A. G. A. Headquarters will be glad to have the views of the members as to the Association going on record as endorsing the adoption of the proposed law by states.

ATTENTION, MANUFACTURERS

MANUFACTURER company members of the Association are requested to answer promptly the letter of January 15 sent out by C. W. Berghorn, Secretary of the Manufacturers Section of the American Gas Association.

This letter states that the Association is contemplating publishing a supplementary classified directory for industrial gas equipment. All manufacturer companies are asked to study the list of principal industries in which gas appliances are used and to inform Mr. Berghorn of the appliances which the company manufactures.

The compilation and publication of this information will be extremely valuable to the entire industry.

Southwest Division Has Record Breaking Meeting at Shreveport

F. L. Chase

WITH a registration of 350 delegates and a program of papers of interest to many branches of the natural gas industry, the Southwest Division, Natural Gas Department, American Gas Association, held a profitable two-day convention at Shreveport, La., Jan. 14 and 15.

The states of Oklahoma, Texas, Louisiana, Arkansas, Mississippi, Alabama, and New Mexico were represented among the delegates, the first three named sending the heaviest delegations. While the attendance was larger than had been expected, the total figure would have been even greater but for the prevalence of influenza and the busy season in the gas industry.

Regrets were expressed because Henry C. Morris, of Dallas, vice-chairman of the department, and N. C. McGowen, of Shreveport, member of the Advisory Committee, were unable to be present.

Frank L. Chase, vice-president, Lone Star Gas Co., Dallas, Texas, presided and was highly praised by the delegates for his skillful handling of the convention and especially for bringing out discussion.

The gas companies of Shreveport, the public, and the press of the convention city gave the meeting enthusiastic support and contributed greatly to its success. Appreciation of the convention for this cooperation was expressed in suitable resolutions.

The convention expressed its wish that the annual meetings of the division be continued and that there be created within the division "technical and commercial committees charged with the duty of developing activities in these lines in this section to be tied in with the activities of the industry nationally." A convention resolution also suggested a study of the question of uniform classification of accounts for the natural gas industry. The convention endorsed the commercial sales educational efforts of the American Gas Association.

One of the outstanding features of the meeting was the appreciable number of young men who participated in the discussions and deliberations, the leaders expressing the opinion that these sectional meetings give many men in the industry an opportunity to be heard who would not have such an opportunity at the national meetings.

H. C. Morris

Remarks of Alexander Forward, managing director of the A. G. A., especially with reference to the value of natural gas to the Southwest, were received with deep interest. He said the Southwest is anticipating what must come throughout the country, the ousting of the smoke nuisance, which he declared is injuring health and depreciating values in many directions.

The Association, he said, is in good spirits and is enjoying good health, having a greater membership than ever in its history. Major Forward referred to the research activities of the association, declaring research to be a "necessity not a luxury." He also touched on the recently established salesmanship course, which he said had received the praise of many executives.

The address of welcome by L. E. Thomas, mayor of Shreveport, and the response by W. M. Phillips, attorney of the Arkansas Natural Gas Corp., opened

Lois Upshaw

E. L. Rawlins

the sessions. The mayor dwelt upon the advantages of natural gas to the city. Rev. James Owens of Shreveport delivered the invocation.

R. J. Daugherty, public relations director of the Empire Companies, Bartlesville, Okla., then gave a bird's-eye view of the industry's development, the hazards of the industry, and the qualities of mind and courage which the men of the industry had expressed in the upward climb to greatness. The title of his paper was "The Development of a Natural Industry."

In part he said:

"We are beginning a new year in the industry. The expansion program will probably be as large, or larger, than during 1928. Great plants and imposing buildings will be constructed. Assets will grow and the balance sheet will take on a more lucrative appearance. Unless all this is accompanied by a spirit of service which emanates from every branch of the service—the men in the pipeline division, compressor stations, office; those who are reading the meters, selling new appliances—we will have accomplished nothing, for after all, when the day's work is done, it isn't whether you have made a dollar, or lost one—it is whether you have played the game according to the rules, and for every dollar received you have given full measure of the product you sell, together with an abundance of service and good will."

"Ideal Distribution Systems for Communities of 250 to 1,500 Meters" was the subject of an address by C. L. May, of the Community Gas Company, Dallas.

Mr. May discussed at length many of the problems experienced in communities where domestic and commercial users are supplied by the same mains and the fluctuations in pressure cause serious leakage and service problems. His explanation of the problem and remedy, in part, follows:

"To attain the saving in construction of an intermediate system, the plant necessarily is made up of mains too small for proper low-pressure distribution, and since both industrial and domestic consumers are connected to the same system of lines, minimum and maximum pressure requirements will fluctuate frequently from day to day, and the probability of having a leaky system, due to added pressure on the mains and service lines, is multiplied by this fluctuation.

"There are many additional advantages that might be mentioned, but the fact is not to be denied that after trying intermediate pressure systems, the majority of the larger gas companies over the country have been constantly converting them into low during the past ten years or more, and this should be certainly concrete evidence that the low-pressure system has been found to be superior."

Mr. May concluded with a technical and detailed explanation for the installation of a low-pressure system.

The paper of H. C. Meade, New Orleans Public Service, Inc., which within recent months has brought natural gas to New Orleans, elicited keen interest. His subject was "Development of Sales of Industrial Gas and the Rate Necessary to Obtain the Business." Mr. Meade's paper is printed in this issue of the MONTHLY.

This paper was discussed interestingly by H. L. Montgomery, general manager, Empire Companies, Bartlesville, Okla., F. L. Chase, and Julius M. Naiman of Birmingham, Ala. Mr. Naiman excited considerable interest with a discussion of methods of signing up business for a new pipe line which the Southern Natural Gas Corp. proposes from the Monroe field in Louisiana to Birmingham and cities east. Mr. Naiman told how his company has secured prospective business in competition with cheap coal, and how brick and lime plants were obtained by showing them lowered costs and more efficiency with the use of gas.

Mr. Montgomery told of conditions which he had faced. His companies had

(Continued on page 111)

Gas Leads All Fuels in 1928 Growth

By ALEXANDER FORWARD

IN a year which maintained for the most part the previous high level of prosperity and industrial activity and yet registered little more than normal increase in the volume of industry, the manufactured gas and natural gas industries made excellent showings. As a matter of fact, the facts and figures brought out below show in a forceful fashion that the gas industry leads the fuels of the country in gains.

MANUFACTURED GAS

The following table of preliminary estimates, prepared and given out by the industries themselves and published at New Years in the financial, business, and daily press, indicates the percentage increase or decrease in fuel sales for 1928 as compared with 1927, with manufactured gas in the lead:

Coke	+2. per cent
Bituminous Coal	—4.8 per cent
Anthracite Coal	—5. per cent
Crude Petroleum	+1. per cent
Manufactured Gas	+3.8 per cent

The sales by manufactured gas companies during 1928 are estimated at 490,000,000,000 cubic feet according to the American Gas Association Statistical Department. The 3.8 per cent figure was derived as follows: On January 1 the American Gas Association had ten months' actual figures, and the last two months' record was estimated on a basis which used the returns on all previous years for purposes of compilation.

NATURAL GAS

It will be noted that the table above refers only to the manufactured gas industry. Consolidation with the natural gas industry has not lasted a sufficient time to afford the collection of as complete information on this branch of the industry as for manufactured gas. However, the Statistical Department of the American Gas Association has estimated that the percentage of increase in natural gas sales in 1928 is a substantial one, the estimated figure being in the neighborhood of 10 per cent.

This estimate is supported by an ingenious calculation by H. J. Struth, petroleum economist of the Gulf Publishing Company of Houston, Texas, in an article in the January issue of *Natural Gas*. Based on the production of natural gas gasoline for eleven months of 1928 with December estimated and allowing for the fact that approximately 94 per cent of all natural gas produced is treated for recovery of natural gasoline, Mr. Struth is of the opinion that the output of natural gas for 1928 is approximately 1,600,000,000,000 cubic feet, as compared with 1,455,000,000,000 cubic feet in 1927, or an increase of slightly more than 10 per cent. There are, however, no available figures showing the increase in natural gas distributed through public utilities in 1928. In previous years this has amounted to approximately 22 per cent of the total output.

BUSINESS IN GENERAL

The Federal Reserve Bank of New York estimated on January 1 that the total volume of all business of the United States in 1928 was slightly less than three per cent larger than in 1927, somewhat below the average annual increase. Thus the manufactured gas business grew slightly more than the general business

(Continued on page 126)

Prepared from data presented at January meeting of Executive Board.

United Corporation is Formed By Bankers

WHAT was interpreted in Wall Street as a move to coordinate public utility properties in the East was the announcement recently of the organization of the United Corporation as a holding company to acquire an interest in a number of important utility organizations. The announcement of the formation of the United Corporation, capitalized at $260,000,000, was made by J. P. Morgan & Co. It said in part:

"The United Corporation has been organized under Delaware laws by J. P. Morgan & Co., Drexel & Co. and Bonbright & Co., Inc., and has made arrangements to acquire certain minority interests in the United Gas Improvement Company, the Public Service Corporation of New Jersey and the Mohawk-Hudson Power Corporation held by the organizers and the American Superpower Corporation."

Simultaneously the American Superpower Corporation announced that the directors had unanimously voted to accept the offer of the United Corporation to exchange its holdings to Public Service Corporation of New Jersey and The United Gas Improvement Company for securities of the United Corporation.

The directors of the United Corporation will be Thomas S. Gates and George Whitney of J. P. Morgan & Co., and Alfred L. Loomis and Langdon K. Thorne of Bonbright & Co. Mr. Loomis is chairman of the American Superpower Corporation while Mr. Thorne is president of that company and also is president of Bonbright & Co., Inc.

Simple Facts Are Stressed by Sales Course

THE new A. G. A. Course in Domestic Gas Salesmanship, now being offered the industry, takes up "Selling Through the Customer's Eyes," in one of the practical units of the course. The four rules stated below seem rather obvious, yet they are important and constantly violated. "Just such simple things as these make a large part of the difference between mediocre and top-level salesmanship," the course states.

The following are the few simple rules which apply to every sales demonstration of gas appliances:

"1. *Make sure of the condition of the appliance in advance.* It is embarrassing to open the door of a refrigerator, for example, and discover that the food kept in it is arranged in a hit-or-miss way. Every man on the floor should do his part to keep all demonstration appliances in apple-pie order.

"2. *Show each part unmistakably as you name it.* Don't merely wave your hand toward a pilot light or an oven-regulator; but put your hand on it or point directly to it.

"3. *Use movement to hold interest.* Good salesmen frequently make slight gestures or handle the appliance in some particular way for the specific purpose of recapturing the wandering attention of a customer. It is a simple device, but effective. Try it.

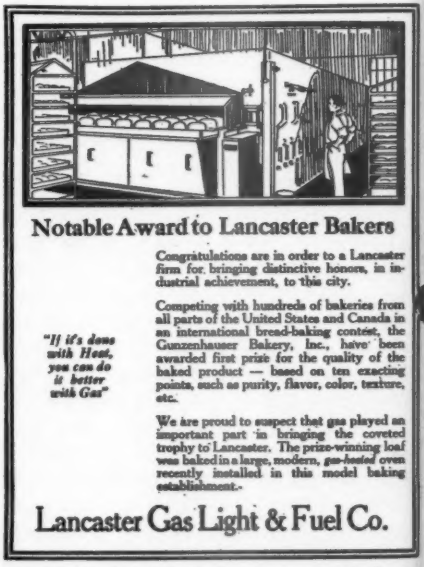
"4. *Have the customer take an active part.* As soon as a customer actually turns on the light, stoops down to look at a feature of the appliance, or even places her hand on a smooth-finished surface, she gets a clearer impression, becomes more interested, and starts to acquire a sense of ownership of the appliance."

Connecticut Gas Association Elects Officers

GEORGE S. HAWLEY, President of the Bridgeport, Conn., Gas Light Co., was re-elected President of the Connecticut Gas Association at the recent annual meeting of the Association.

Other officers reelected include:

Andrew J. Sloper, New Britain, vice-president; E. E. Eysenbach, Hartford, secretary; Charles A. Learned, Meriden, treasurer, and Theodore R. Sucher, New Haven, assistant secretary.


Notable Award to Lancaster Bakers
Congratulations are in order to a Lancaster firm for bringing distinctive honors, in industrial achievement, to this city.
Competing with hundreds of bakeries from all parts of the United States and Canada in an international bread-baking contest, the Gunzenhauser Bakery, Inc., have been awarded first prize for the quality of the baked product — based on ten exacting points, such as purity, flavor, color, texture, etc.
"If it's done with Heat, you can do it better with Gas"
We are proud to suspect that gas played an important part in bringing the coveted trophy to Lancaster. The prize-winning loaf was baked in a large, modern, gas-heated oven recently installed in this model baking establishment.
Lancaster Gas Light & Fuel Co.

Gas is the ideal fuel for Lancaster bakers, and for all bakers. Gas is efficient, clean, speedy—and apparently it also helps win contests

Changing to Natural Gas in Michigan

By ARTHUR W. STACE

A. W. Stace

EIGHT months ago Muskegon like its fellow Michigan cities was a "manufactured gas" town. Its gas was furnished from the plant of the Muskegon Traction and Lighting Co. There coal and oil were turned into a more convenient, more efficient form of fuel, and sent out through pipes to homes, stores, factories, restaurants and hotels ready for service at the demand of the user.

Today Muskegon is a "natural gas" town, the only one in Michigan. The change has come suddenly and in many ways "upsettingly."

Oil was first struck in the Muskegon field on Dec. 12, 1927. Accompanying the oil was gas, but it was not until along last spring and early summer that the natural gas began to appear in quantities sufficient to indicate the possibility of its being used as a supply for the city.

The Muskegon Traction and Lighting Co. had its eye on natural gas from the moment the first big well was struck. But the company naturally was conservative. It couldn't afford to get excited even though natural gas fever was running high in the town. It had the long-time interests of its customers and of its stockholders to consider. Pipe lines cost a lot of money. So do changes in systems from manufactured gas to natural gas. Even more costly are changes back from natural gas to manufactured gas when the natural gas supply runs out. The customer, too, has his expenses and his inconveniences in changing from one form of gas to the other.

So the company waited to see if the gas finds were something more than the opening of small pockets. Its caution was justified as regards the Traverse sands—struck at 1626 to 1700 feet—for wells sunk into this formation showed a decided falling off in pressure when additional wells were opened.

When, however, large flows of gas were struck by wells drilled into the Dundee sands several hundred feet below the Traverse formation, indicating a considerable supply of natural gas, the company at once set about changing its plant to furnish natural gas instead of manufactured gas.

A pipe line was laid to the oil and gas field at a cost of $65,000. Contracts were made with the Lima Oil corporation and the Johnson Oil Refining company for gas from their wells. A new schedule of rates was prepared giving the customers the benefit of the lower cost of natural gas.

On Labor Day, 1928, the change was made from manufactured to natural gas. The change-over cost the company $20,000, which included the adjustment of fixtures for the use of the new and different gas. Natural gas has greater heating qualities than manufactured gas. Hence the size of orifices had to be cut down. Advice had to be given as to methods of using the hotter gas.

The Muskegon Traction and Lighting Co. was able to shut down its gas generating equipment, but was obliged to continue the use of its purifiers, holders, boiler plant, fuel handling equipment, pressure pumps, and auxiliary equipment.

The natural gas as it comes from the Traverse formation, some 1600 to 1700 feet down, is sweet and clear. It could be turned directly into the mains and be used by customers without treatment. The natural gas coming from the deeper Dundee formation, however, contains a considerable quantity of sulphur in the form of hydrogen sulphide. This has to

Mr. Stace is director of the Michigan Public Utility Information Bureau.

be removed before the gas is ready for domestic use or for some industrial uses. Most of the gas available from the Muskegon field is coming from the Dundee formation—at a depth of around 2000 feet—inasmuch as there is not enough gas available from the Traverse sands to supply requirements.

Before natural gas was struck, the Muskegon Traction and Lighting Co. had a daily load of around 1,400,000 cu.ft. Upon introduction of natural gas the daily load dropped to 500,000 or 600,000 cu.ft.

There were two reasons for this. The first reason was that the Continental Motors Corp. and its subsidiary, the Lakey Foundry and Machine Co., which formerly used 600,000 cu.ft. of manufactured gas a day for motor testing, foundry core baking, steel treating, and other industrial purposes laid their own pipe line to the field to get natural gas direct. The other reason was that a cu.ft. of natural gas contains around 1060 B.t.u. as compared to 530 B.t.u. in a cu.ft. of manufactured gas.

It is figured that the greater heating qualities of natural gas have caused a reduction in sales to domestic customers to the extent of 35 to 40 per cent.

The Muskegon Traction and Lighting Co. went vigorously to work rebuilding its load, with the result that in November this had been increased to an average of 644,000 cu.ft. a day, and in December to 840,000 cu.ft. a day. In the first half of January the load advanced to more than 1,000,000 cu.ft. a day. Important factors in building the load were the development of house heating and gains in commercial business.

The new schedule of rates gives a decrease in cost per 1000 cu.ft of gas, which, together with the higher B.t.u. content, effects a considerable apparent saving to all customers. Whether this is a real saving will depend upon the life of the gas field and the length of service given by such new equipment as may be purchased.

The company pays an average of 13 cents for gas in the field. It has to put the gas through regulators and purifiers. By the time the gas gets to the holder, it costs the company 23½ cents per 1000 cu.ft. Beyond the holder the costs, including distribution and overhead, are the same as for manufactured gas. It used to cost the company 42 cents per 1000 cu.ft. to put manufactured gas into the holder.

Thus the company saves only 18½ cents per 1000 cu.ft. on its gas costs by using natural gas instead of manufacturing its product. This 18½ cents saving is more than lost in the reduction in rates to customers.

Many persons in Muskegon hailed natural gas as a destroyer of old man winter heating trouble. Some installed gas burners for house heating and sat back for a comfortable visit from Boreas without the bother of continually feeding and watching a furnace fire. Others, when they came to figure the cost of gas furnaces, began to inquire as to the assurance of a continued natural gas supply. They did not want to put in a gas burner and then have the natural gas go back on them. Natural gas at the rate charged for it and with its high heating content can compete with high priced coals for house heating. But manufactured gas is normally more expensive than high priced coals. Many persons can afford it for house heating as a luxury or as a labor saver. Other persons, who are living on a narrow margin, cannot afford more expensive fuel than coal.

If the householder felt he could afford to heat his home with gas even if natural gas should pass from the scene, well and good. If the householder felt he could not afford gas heating at manufactured gas rates, he found the investment in a burner unwise.

A number of persons are installing gas heating plants in Muskegon. But until a more enduring supply of natural gas is assured, this comfort and convenience is scarcely for persons of small means.

(Continued on page 114)

Smoke Fighting—A Rotarian Job for Gas Men

By HENRY OBERMEYER

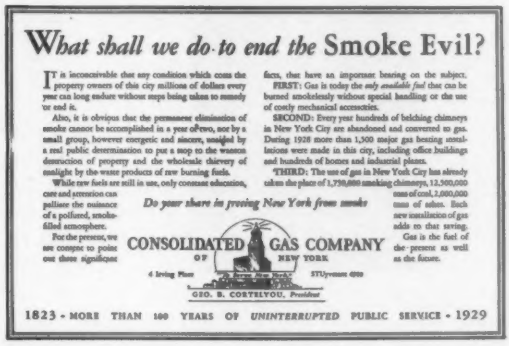
WE hear and read a good deal about the intimate relationship between a gas company and the community which it serves. The development of each depends upon the prosperity of the other. As a result, it is only natural that the gas company should take an active part in the civic and social life of which it is such an important unit.

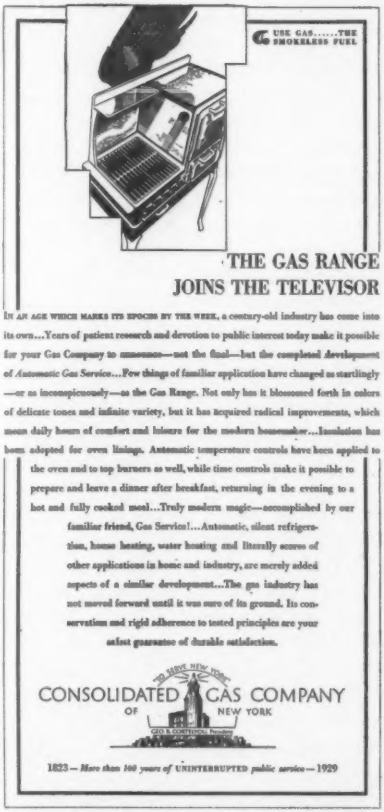
If the preceding paragraph sounds like an excerpt from a Chamber of Commerce talk by the director of public relations, let it pass simply as a means of greeting the reader with a familiar introduction.

We can safely assume then that, in general, no single body of business men takes a more active part in civic enterprises than the public utility groups. This, of course, is as it should be. They render the essential services of light, heat, power, communication, and transportation, without which no modern community can progress or even exist. On the other hand, they usually derive all of their revenue from within the boundaries of the civic domain and are therefore inextricably bound up with the prosperity and welfare of their neighbors.

What has all this to do with smoke?

At the time this article was written, you could pick up almost any newspaper from one end of the country to the other and find in it some record of a local movement to stamp out the smoke nuisance. At the same time you could investigate the activities of almost any gas company and find therein a long list of civic enterprises with which the company was actively identified. To what extent do these two facts serve to complement each other?


What shall we do to end the Smoke Evil?
It is inconceivable that any condition which costs the property owners of this city millions of dollars every year can long endure without steps being taken to remedy or end it.
Also, it is obvious that the permanent elimination of smoke cannot be accomplished in a year or two, nor by a small group, however energetic and sincere, unaided by a real public determination to put a stop to the wanton destruction of property and the wholesale thievery of sunlight by the waste products of raw burning fuels.
While raw fuels are still in use, only constant education, care and attention can palliate the nuisance of a polluted, smoke-filled atmosphere.
For the present, we can conspire to point out three significant facts, that have an important bearing on the subject.
FIRST: Gas is today the only available fuel that can be burned smokelessly without special handling or the use of costly mechanical accessories.
SECOND: Every year hundreds of belching chimneys in New York City are abandoned and converted to gas. During 1928 more than 1,500 major gas heating installations were made in this city, including office buildings and hundreds of homes and industrial plants.
THIRD: The use of gas in New York City has already taken the place of 1,750,000 smoking chimneys, 12,500,000 tons of coal, 1,000,000 tons of ashes. Each new installation of gas adds to that saving.
Gas is the fuel of the present as well as the future.
Do your share in freeing New York from smoke
CONSOLIDATED GAS COMPANY OF NEW YORK
4 Irving Place
GEO. B. CORTELYOU, President
1823 - MORE THAN 100 YEARS OF UNINTERRUPTED PUBLIC SERVICE - 1929


USE GAS.....THE SMOKELESS FUEL
THE GAS RANGE JOINS THE TELEVISOR
IN AN AGE WHICH MARKS ITS EPOCHS BY THE WEEK, a century-old industry has come into its own...Years of patient research and devotion to public interest today make it possible for your Gas Company to announce—not the final—but the completed development of Automatic Gas Service...Few things of familiar application have changed so startlingly—or so inconspicuously—as the Gas Range. Not only has it blossomed forth in colors of delicate tones and infinite variety, but it has acquired radical improvements, which mean daily hours of comfort and leisure for the modern housemaker...Insulation has been adopted for oven linings. Automatic temperature controls have been applied to the oven and to top burners as well, while time controls make it possible to prepare and leave a dinner after breakfast, returning in the evening to a hot and fully cooked meal...Truly modern magic—accomplished by our familiar friend, Gas Service!...Automatic, silent refrigeration, house heating, water heating and literally scores of other applications in home and industry, are merely added aspects of a similar development...The gas industry has not moved forward until it was sure of its ground. Its conservatism and rigid adherence to tested principles are your safest guarantee of durable satisfaction.
CONSOLIDATED GAS COMPANY OF NEW YORK
1823—More than 100 years of UNINTERRUPTED public service—1929

Two advertisements, one in a newspaper and the other in a magazine, which state clearly the case against smoke

Mr. Obermeyer is assistant to vice-president, Consolidated Gas Co. of New York.

Smoke sticker used in New York

Like other gas companies, the Consolidated Gas Company of New York is interested in many things simply because it is a good citizen of the community. Its representatives belong to the Merchants' Association, Boards of Trade, Real Estate Boards, Kiwanis Clubs, Advertising Clubs, and other civic organizations. Unfortunately, many of these affiliations are but indirectly related to the extension of gas service. The movement to eliminate smoke, however, is in a category all its own. Here is a subject which is at the very foundation of the gas business; yet many gas companies take only a passive or at best a spasmodic part in its proceedings. Certainly, here, if anywhere, is a point at which the gas man can meet his fellow-citizen on a common ground and work together for the benefit of the city.

In New York we never fail to seize an opportunity to strike a blow in behalf of more sunshine and cleaner air. We enjoy the good will of anti-smoke societies, several of whom are doing an important work in this direction. Last year we were responsible for an entire exhibit, in connection with the local Parents' Exposition, which helped to demonstrate the effects of smoke upon the health and property of our people. In this exhibit the Consolidated Gas Company received no publicity whatever. On the other hand, in most of our newspaper advertisements, we are constantly reminding the public to "Use Gas the Smokeless Fuel" or making the claim that "Gas is today the only available fuel that can be burned smokelessly without special handling or the use of costly mechanical accessories."

In this approach to the subject, we recognize a distinction between a civic activity and one which has a direct commercial aim. The first must be rigidly divorced from any appearance of self-interest. However, this presents no barrier to an intelligent and effective tie-up with the sale of gas for heating and other purposes. In other words, it is necessary to arouse public indignation over the production of smoke, and the gas company should play its part openly in such a program with all the facilities at its disposal. Since gas, however, is the logical successor to smoke-producing fuels, the gas company would surely be remiss if it failed to use the smoke issue as an important argument in sales promotion.

On the desk before me I have a copy of *Donnelly's Red Book*, in which all the business concerns of New York City are listed in their proper classifications. Each one of these concerns handles a certain amount of correspondence every day. Why shouldn't they be encouraged to join our campaign to eliminate smoke and at the same time be brought to realize in some tangible fashion the importance of gas in its eventual accomplishment?

We prepared what we are immodest enough to regard as an effective little correspondence sticker, which shows a huge hand sweeping away the clouds of smoke through which a ray of sun shines upon the faces of two children, thousands of other children being indicated as still living in a sunless atmosphere. The legend on the sticker is simply "Free New York From Smoke." The preparation of this sticker is a free-will contribution on the part of the gas company. To some extent, this also includes its distribution. Using the *Red Book* as aforementioned, we are sending the following letter to

(Continued on page 114)

Laboratory Tests all Sizes of Appliances

By R. M. CONNER

SOME misunderstanding seems to exist, particularly among appliance manufacturers and gas company commercial men, regarding the Laboratory's facilities for testing large size gas house heating boilers and furnaces. Ever since the Laboratory staff moved into its present quarters on July 23 last, the establishment has been in a position to test any size house heating unit offered by appliance manufacturers of the country as a commercial product.

One of the outstanding features of the new Laboratory building is a large two-story room, approximately 30 x 50 feet, equipped with both natural and artificial ventilating systems. The ventilating fans are controlled by variable speed motors so that any number of air changes desired, from one to six per hour, may be secured at will.

All gas boiler performance tests are made largely after the accepted methods which have been in use throughout the country for a number of years. The structural examinations are confined principally to the rules laid down by the Cast Iron Division of the A.S.M.E. Low Pressure Heating Boiler Code.

Furnace test methods are novel in two respects: First, in that the volume of heated air is measured electrically by means of a Thomas meter and, second, that practically all temperature readings are secured by the use of thermocouples, it being found that they give more accurate and rapid results than can be obtained by the use of thermometers. Otherwise, furnace test methods follow generally accepted practices.

The American Gas Association now has completed national requirements for the following general types of domestic gas equipment:

Flexible gas tubing.
Gas ranges.
Space heaters.
Water heaters.
House heating boilers and furnaces.
Hot plates and laundry stoves.

The Testing Laboratory is daily conducting tests on all sizes and kinds of the above equipment.

In addition to yearly revisions of all of the above-mentioned requirements, new ones are now under consideration for gas fired clothes dryers and incinerators. During the present year, committees will probably be formed to take up the preparation of requirements for gas heated irons and ironers as well as hotel ranges.

Mr. Conner is director of the American Gas Association Testing Laboratory, Cleveland, Ohio.

Germany Plans for Gas and Water Exhibition

THE 1929 Gas and Water Exhibition which is to be held in Berlin, Germany, April 19 to July 21, is expected to be a spectacular demonstration. It is expected that the exhibition will cover an area of 312,000 sq.ft., and many highly technical and scientific processes will be demonstrated. What has been called one of the greatest miniature gas plants will be put on exhibition. This model, 10,700 sq.ft. in size, is built to allow the visitor to walk through all parts of it.

There will also be an exhibition of appliances, etc.

The industrial gas exhibition will be particularly interesting because actual shops and sections of factories will be presented to show how gas serves the bakery, coffee roaster, the foundry, the laundry, and the ceramic shop, etc. Approximately 175,000 sq.ft. of space will be used to demonstrate gas production and 35,000 sq.ft. to present the use of gas in home, business, and industry.

M. A. PESSONS was recently made manager of the new Process Stove Co. division of the American Stove Co., at Cleveland, Ohio. He fills the vacancy caused by the death of John G. Way.

IN THE LETTER BOX

GERMAN GAS AND WATER ASSOCIATION

Berlin, Dec. 11, 1928.

Dear Major Forward:

I am not unmindful of the very kind and most hospitable manner in which I was received by you and the honored President of the American Gas Association at the meeting of the A.G.A., as well as the gentlemen of your office, as far as I had the good luck to come into closer contact with them.

My request is that you permit me to add my thanks to those previously expressed telegraphically by the President of the German Association of Gas and Water Works. I believe that I could not do this better than to send you, as a Christmas present, the book "Germany." It is intended for the American gas men who might contemplate visiting Germany in the next year, and I ask, therefore, that you give it room in your office, that as many members of the American Gas Association as possible might have opportunity to look at it. I hope that the pictures of the beautiful scenery and cities of Germany will attract many of the Americans who might have the intention of visiting Germany this summer. I had heard during my pleasant visit to the A.G.A. meetings that you, Mr. Conner, and Mr. Segeler might possibly come over to Europe, and I would like to strengthen your resolve to become a new visitor to Germany.

This is the wish I bring you in the name of the German Association of Gas and Water Works, sending you with it a release in German, as well as a special English text describing the details of the German Exposition of Gas and Water Works, Berlin, 1929. I beg you to be convinced how much the German gas men would be pleased if a large group of visitors from America come to see the exhibition. There are preparations being made for the organization of trips through the noteworthy points of interest of the gas industry, especially those that are located in points of scenic interest or in places noted for culture and artistic prominence.

KARL LEMPELIUS,
Managing Director.

Statistics on Consumption of Gas in California

EVIDENCE that California is a heavy consumer of gas for all heating purposes is seen in a report just issued by the State Railroad Commission.

Gas consumers in California during the fiscal year of 1927 reached the total of 1,200,000, according to an analysis of the commission's report by the Superbo Manufacturing Company.

During the year under discussion there was sold to domestic and industrial consumers of California by the gas utilities, a total of 95,148,000,000 cubic feet of gas, including natural gas, mixed gas and oil gas.

Gray Colored Holder Wins Praise in New York

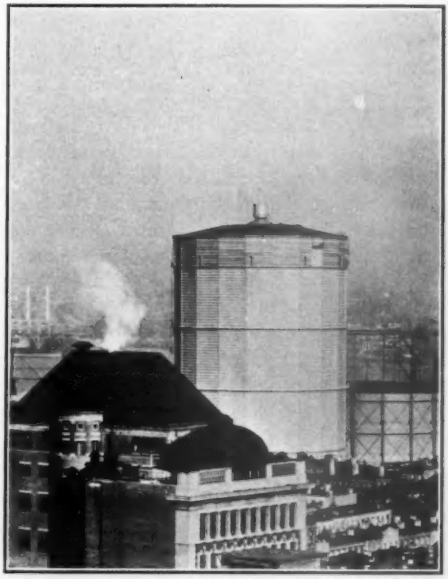
THE illustration below shows the waterless holder at the 21st St. Station of the Consolidated Gas Co. of New York after it had been camouflaged to blend with its surroundings.

The following poem, taken from Russel Crouse's column in the *New York Evening Post*, comments on the holder painting:

TO A GAS HOUSE ESTHETE

"No longer
Will my flock of pigeons
Circling above the roof
Be leered at daily
By the new gas tank
Coated with red lead;
For our gas company
Has set some men painting
This red giant
An inoffensive gray
That seems to blend
With the autumnal sky."

—JOHN M'CAULEY.



What Represents Typical Use of Appliances?

By C. GEORGE SEGELER

THERE have been no end of attempts made to plan appliance sales campaigns with an eye to what volume of gas consumption would thus be added to the gas company lines. Up to the present time there has been no accurate statistical study of this problem, because it is impossible to get the data required. Very few of the many appliances that are used in the home are connected to separate meters. It is, therefore, practically impossible to segregate the gas consumption which would probably be derived from the installation of a given number of water heaters, or laundry dryers, or other specific appliances.

It is interesting, however, to set up a table showing the probable gas consumptions based on the normal or typical use which a family would make of an appliance once they had understood its convenience and value.

It is well known to every gas man that a large number of unprofitable

Mr. Segeler is technical editor, American Gas Association.

GAS CONSUMPTION OF DOMESTIC APPLIANCES
Six Room House, One Bath—Family of Five
Manufactured Gas

	Connected Load Cu.Ft. Per Hr.	*Unit Demand Figures Cu.Ft. Per Hr.*	*Consumption of Gas with Normal Usage Cu.Ft. Per Yr.*
Kitchen range	110		30,000
Refrigerator			
Continuous	3½		
Intermittent	30		24,000
Water Heaters			
Manual	50		30,000
Instantaneous	240	60 cu.ft. per gal. rating	50,000
Storage	40		50,000
Incinerator	40		10,000
Gas Steam Boiler	300	85 cu.ft. per 100 sq.ft. installed radiation	350,000
Gas Hot Water Boiler	300	56 cu.ft. per 100 sq.ft. hot water radiation	315,000
Gas Warm Air Furnace	250	½ cu.ft. per sq.in. leader area	300,000*
Laundry Dryer	20		2,160
Stove	30		2,400
Ironer	20		2,000
Washer	20		1,200
Radiant Heater†	30	3 cu.ft. per radiant	900
Room Heater (flame type)†	20		600
Warm Air Radiator	20		20,000
Gas-Fired Steam Radiator	30	3 cu.ft. per section	30,000
Floor Furnace	100		100,000
Gas Igniter for Wood Fire	5		—
Wall Heater	15		600
Gas Lights	9		2,700
Garage Heater	50		20,000

*Warm air furnaces are usually employed in smaller homes, and the total annual consumption has been therefore reduced. This does not imply that they are more efficient than the other heating mediums.

† Hose connected space heaters are used very intermittently as a rule.

customers are attached to his lines. These customers are unprofitable because the use they make of their gas appliances is so small. As a result an *average* of gas consumption per appliance would always be lower than a figure showing the typical or normal usage.

This table of gas consumptions might be termed an ideal set-up of what a family of two adults, two children, and one servant should use in order to enjoy fully the benefits of the various gas appliances. Such a normal gas consumption set-up must have a number of assumptions. For this table, for example, it is assumed that the family are supplied with manufactured gas, about 530 B.t.u., that they are living in a detached frame house, six rooms and one bath, and that the house is located in a fairly prosperous residential community in approximately the latitude of New York.

A similar table was published last year in the 1928 Report of the Committee on Salesmen's Compensation. The figures in that table are notably different from these figures, but that table was supposed to be more nearly one of average gas appliance consumption. Moreover, it was a table designed as a basis for salesmen's compensation. Logically, this would require the use of *average* rather than *normal* figures.

The proper label for this table is that it is an approximation. It has been set up as a target to destroy by comment and criticism so that it might be possible to prepare eventually a better picture of what can be expected in the way of load building through gas appliance sales.

Connecticut Gas Plants Are Now Interconnected

MANY small uneconomical gas plants throughout the United States are rapidly being abandoned in favor of high pressure transmission lines and large economical manufacturing plants. Numerous large high pressure mains have been laid in the West, but probably the largest of such systems in the East recently was made fully available when a 20-inch main crossing under the Quinnipiac River, Connecticut, was completed.

The main, of steel excepting the underriver section, which is cast iron, is of 16″, 12″, 8″ and 6″ pipe. It has a total length of approximately 65 miles and connects the distribution systems of Hartford and New Haven and the towns and cities en route with the Connecticut Coke Company's plant at New Haven. The line was built by United Engineers & Constructors, Inc., Philadelphia, a subsidiary of The United Gas Improvement Company.

Started in the summer of 1927, the project was extended in stages and now supplies a large part of the gas requirements of the Connecticut Light and Power Company in Bristol, Plainville, Cromwell, Middletown, and Meriden, the New Haven Gas Light Company in New Haven, and the Hartford Gas Light Company in Hartford.

From New Haven to Yalesville, a distance of approximately 18 miles, the main is 16″ with couplings. From Yalesville to Hartford, 21 miles, it is 12″ with welded joints. On this section, the main through the city of Meriden was equipped with couplings over the welds.

A 6″ welded spur line, 10 miles in length, was taken from the main line to supply the towns of Cromwell and Middletown. In Cromwell a complete distribution system, consisting of 4 miles of welded 4″ and 2″ pipe, was installed.

Another spur line—11 miles of 8″ welded—was extended from the main line to supply Plainville and Bristol.

Complete metering and governor stations were built at Meriden, Plainville, and Cromwell and the entire line was equipped with an extensive system of valves.

Gas generating plants at Bristol, Meriden, and Middletown have been discontinued and the plants at Hartford and New Haven are being operated mainly to supply peak loads.

Interesting truck poster of the Consolidated Gas Co. of New York

Customers and Companies Are Interested Equally in Rates

By THOMAS N. McCARTER

T. N. McCarter

IT is as of much importance to the users of electric and gas service as it is to the companies which provide these services that rates charged should be of a character, which, while providing such fair return to the owners as will enable them to improve and expand facilities to meet public requirements, will encourage use of the commodity sold.

The experience of both the electric and gas industry shows that quantity production not only lowers manufacturing cost but tends to more widely distribute overhead charges, and so eventually to make possible lower unit rates. The rates charged by electric companies are indicated by a descending curve, practically continuous from the start of the industry, and this decrease in cost to the consumer has been largely the result of increased consumption.

Since under the system of public utility regulation in force in this country, rates of public utility companies are based upon the cost of providing the service, with the permissible rate of return to the owners a practically fixed quantity, and other costs of the service easily determinable, the matter of fixing exact rate charges is largely a question of correctly apportioning charges between the various classes of users.

An examination of both electric and gas costs of every nature shows very clearly that these are of two sorts—first, those that depend upon the amount of gas or electricity consumed; and, second, those that do not so depend. In other words, there are certain considerable and very definite costs assumed by the company whenever it puts a new customer upon its mains, whether or not that customer consumes a kilowatt hour of electricity or a cubic foot of gas.

It is evident, then, that if in the case of any installation consumption is not sufficient to cover this fixed charge, the consumer is being carried at a loss, and the cost of serving him is being borne by other patrons whose consumption is higher.

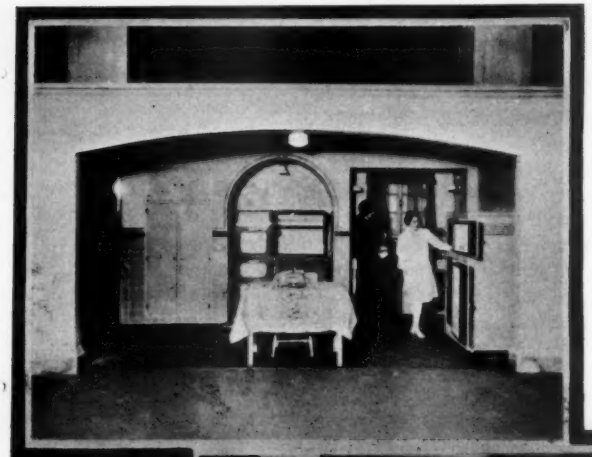
In the case of both gas and electricity and particularly gas, changing living conditions—the popularity of the apartment house, of the delicatessen store, of precooked food, of central laundries, of eating in restaurants and hotels, the widespread ownership of automobiles, which take people away from their homes, and other factors have cut down average home consumption and have increased the number of customers being served at a loss. At the same time gas and electric labor saving and convenience producing domestic appliances have been developed, the use of which can be popularized under favorable quantity rates.

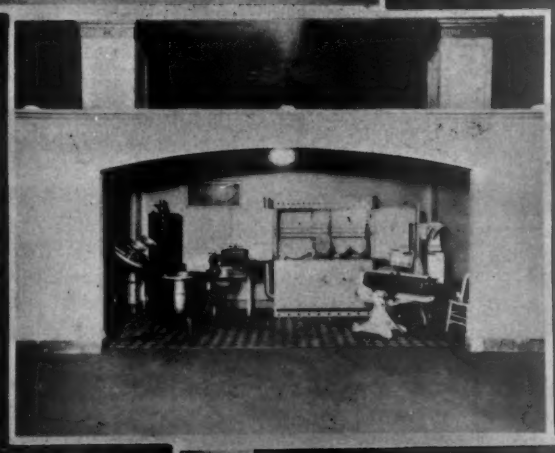
It is to meet this situation that many companies are adopting a rate structure which provides a minimum charge or a so-called "standby charge" sufficient to cover the initial and fixed cost of serving a customer and a "commodity" charge low enough to induce increased use.

I believe that rates so constituted are correct in principle and that they inure to every one's benefit, since they encourage increased use of the service upon which in the end the question of lower rates depends. For this reason it may be expected that more and more companies will as time goes on adopt in their rate structure the principle they embody.

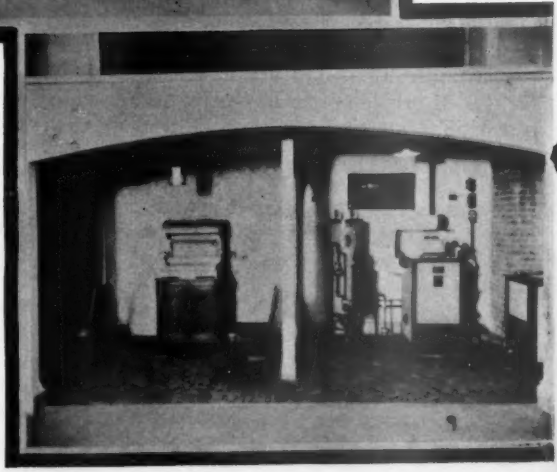
Mr. McCarter is President of The Public Service Corporation of New Jersey, Newark, N. J.

New Appliance Display Floor of the Consolidated Gas Co. of New York





Views of the new appliance sales floor of Consolidated Gas Co. of New York



The new sales floor has four display windows on one street side, five large and five small windows on the other. The permanent exhibitions on the sales floor—a kitchen, cellar, laundry, and a feature booth. These are located opposite entrances, and attract great attention

A. G. A. Holds Pacific Coast Conference February 6-7 at Los Angeles

THE Pacific Coast Conference of the Association's Advisory Council, Executive Board, officers and directors will be held at the Hotel Biltmore, Los Angeles, Calif., Wednesday and Thursday, February 6-7.

The program that has been developed embraces subjects of great interest to the Eastern and Western gas men. It is as follows:

FEBRUARY 6—10:00 A. M.

Welcome to Pacific Coast, by C. H. Dickey, president, Pacific Coast Gas Association.

Welcome to Los Angeles, by F. S. Wade, chairman, Committee on Arrangements and Program.

Response, by Oscar H. Fogg, president, American Gas Association.

Nationwide Survey—Present Conditions and Future Possibilities:

Pacific Northwest, by Guy W. Talbot, president, Portland Gas & Coke Co., Portland, Ore.

Pacific Southwest, by A. F. Hockenbeamer, president, Pacific Gas & Electric Co., San Francisco, Calif.

Middle West, by Samuel Insull, Jr., president, Midland Utilities Co., Chicago, Ill.

South, by Henry C. Morris, president, Dallas Gas Co., Dallas, Texas.

Atlantic Seaboard, by Floyd W. Parsons, editorial director, *Gas Age-Record*, New York, N. Y.

New England, by F. C. Freeman, vice-president, Providence Gas Co., Providence, R. I.

Canada, by Arthur Hewitt, general manager, Consumers Gas Co. of Toronto, Toronto, Ont.

Are Sales Conditions Different? by Clyde H. Potter, chief commercial agent, Southern Counties Gas Co., and chairman, Pacific Coast Gas Ass'n Commercial Section.

FEBRUARY 6—1:30 P. M.

Agencies of Progress, by Alexander Forward, managing director, American Gas Association.

The New England Plan of Cooperative Advertising, by E. H. Bauer, manager, Worcester Gas Light Co., Worcester, Mass.

Discussion by C. B. Babcock, president, C. B. Babcock Co., Los Angeles, Calif.

Cooperative Dealer Relations on the Pacific Coast, by R. E. Fisher, vice-president, public relations and sales, Pacific Gas & Electric Co., San Francisco, Calif.

Public Utility Financing on the Pacific Coast, by C. O. G. Miller, president, Pacific Lighting Co., San Francisco, Calif.

Research Program of the Gas Industry, by H. C. Abell, vice-president, Electric Bond & Share Co., New York, N. Y.

FEBRUARY 7—10:00 A. M.

The Pacific Coast, Its Influence and Importance, by LeRoy M. Edwards, general counsel, Southern Counties Gas Co., Los Angeles, Calif.

Conservation of Natural Gas, by A. F. Bridge, vice-president of operations, Southern Counties Gas Co., Los Angeles, Calif.

Utilization of Refinery Gas, by W. S. Yard, vice-president of gas operations, Pacific Gas & Electric Co., San Francisco, Calif.

Storage and Measurement of Large Volumes, by S. W. Meals, president, Carnegie Natural Gas Co., Pittsburgh, Pa., and chairman Natural Gas Department, A. G. A.

Manufactured Gas Technical Developments, by C. J. Ramsburg, vice-president, The Koppers Co., Pittsburgh, Pa.

Discussion by E. L. Hall, general superintendent, Portland Gas & Coke Co., Portland, Ore., and by H. L. Masser, vice-president and executive engineer, Los Angeles Gas & Electric Corp., Los Angeles, Calif.

Propane and Butane Competition, by C. A. Munroe, president, Northern Utilities Co., and R. G. Griswold, chief technician, Cities Service Co., New York, N. Y.

Closing Remarks, by Bernard J. Mullaney, vice-president, The Peoples Gas Light & Coke Co., Chicago, Ill., and vice-president, American Gas Association.

Following the adjournment of the afternoon session on Feb. 6 there will be a meeting of the Executive Board of the American Gas Association.

The Committee on Arrangements and Program for the Conference is as follows:

Chairman, F. S. Wade, president and general manager, Southern Counties Gas Co., Los Angeles, Calif.

H. C. Abell, vice-president, Electric Bond & Share Co., New York, N. Y.

K. R. Boyes, secretary, American Gas Association, New York, N. Y.

Clifford Johnstone, secretary, Pacific Coast Gas Association, San Francisco, Calif.

S. W. Meals, chairman, Natural Gas Department, A. G. A., and president, Carnegie Natural Gas Co., Pittsburgh, Pa.

H. Leigh Whitelaw, vice-president, American Gas Products Corp., New York, N. Y.

The Committee on Pacific Coast Arrangements, as appointed by Mr. Wade, is as follows:

Chairman, N. R. McKee, Southern Counties Gas Co., Los Angeles, Calif.

N. L. Morse, Southern California Gas Co., Los Angeles, Calif.

T. B. Parks, Los Angeles Gas & Electric Corp., Los Angeles, Calif.

W. M. Thompson, Reliance Manufacturing Co., Pasadena, Calif.

C. D. Weiss, San Diego Consolidated Gas & Electric Co., San Diego, Calif.

W. F. Rockwell is Subject of Paper Column

AN interesting side-light on a man prominent in the manufactured and natural gas industries was brought out in the Dec. 8 issue of the Pittsburgh, Pa., *Press,* in a column entitled "Sidelights."

"When one has circled the globe, with its 25,000 odd miles, one certainly believes he has been traveling some. Yet that distance—great as it is on this terrestrial sphere, and less than a pin point in the universe—is 'covered,' every now and then, in a couple of weeks, it seems, by W. F. Rockwell, president of the Pittsburgh Equitable Meter Co.

"For Mr. Rockwell is an indomitable traveler, using as his means of transportation street cars, steamships, automobiles, trains, balloons and airplanes. It all depends upon the circumstances, in what part of the country Mr. Rockwell may happen to be, and what point he may happen to have in mind.

"As a major in the transportation division, Mr. Rockwell has spent much of his time on active duty in Washington, the past few years. That's the reason, perhaps, he has been interesting himself in the army transportation problem, upon which his views have been eagerly sought by the 'higher-ups' in the United States Government's affairs.

"His familiarity does not lie upon the ground, by any means, as he knows his air traveling as well as the next man, and maybe a little better. Also he has written a quite exhaustive article on 'Progress in Military Transportation,' in which he has broadcast his opinions, based upon years of studious research, as well as actual experience.

* * *

"You know, as president of the Pittsburgh Equitable Meter, Mr. Rockwell finds it necessary to be here today, there tomorrow, and some other place the day after tomorrow. Naturally it keeps him on the jump, from one week to the next. Here is a brief sketch of his itinerary on recent Saturday afternoons, for he is a most ardent football fan, and likes to take in the big games, when his arduous duties will permit of such a diversion:

"He witnessed the game at Annapolis, between Boston College and the Navy teams, on Saturday, Oct. 6. Then he saw Pitt play West Virginia here on Saturday, Oct. 13. The following Saturday, Oct. 20, he was present at the game between Northwestern University and Kentucky, at Chicago. A week later he was in Denver and on Nov. 3 in San Francisco.

"But that wasn't all, for in between times he took a run down to Atlantic City, to attend the convention of the American Gas Assn., saw the exhibit at Tulsa and was at a meeting in New York of the American Water Works Institute of which he is president.

* * *

"On a recent trip to the western coast, he found that he had a luncheon engagement and a dinner engagement for the same day. This wouldn't be so perplexing, except for the fact that between the two points was a stretch of three or four hundred miles.

"Still, that didn't phase a man of Mr. Rockwell's resources. After he had concluded the business that demanded his presence at the luncheon he just loafed around for an hour or so, and then hopped an airplane which carried him to his dinner engagement, and with plenty of time to wash up and get into his tuxedo.

" 'I just had to be there and I was,' he remarked to me a few days after. That's the kind of a man you will find W. F., though."

Analysis of Commission Powers Published

AFTER three years of research of public utility commission regulations in the United States, Bonbright & Company, Inc., of New York, have prepared for distribution an analysis of the principal powers and jurisdiction of the state public utility regulatory commissions in each state of the Union.

This is said to be the first comprehensive analysis to appear in this field. In addition to containing an outline of all State regulations on utilities, the analysis has a chart, giving State by State, the chief phases of utility legislation on which the commissions are given jurisdiction. It was prepared under the supervision of Carl D. Jackson, counsel to National Electric Light Association and to American Gas Association, and Winthrop, Stimson, Putnam & Roberts, counsel to Bonbright & Co., Inc.

What Is Happening in Home Ownership?

By CHESLA C. SHERLOCK

IN this article Mr. Sherlock discusses the broad aspects of home ownership as affecting the industry which has a service or material to sell to the American family. As an editor, he talks to the commercial enterprise as an advertiser, and he shows trends which must be given serious consideration at this time.—Editor.

WHILE I might discuss editorial problems from strictly an editorial basis, I do not care to do so, because it seems to me that there is a much more important angle of extreme mutual interest which we oftentimes overlook.

I have always felt that we are both engaged in want merchandising. Those of us on the editorial side may be said to be wholesalers in want merchandising, whereas those of you on the advertising side are retailers in want merchandising, in that you are specifically interested in a few products which are necessary to make possible a complete ideal of better homes, of more convenience and comfort in those homes, and a better quality of living which editors of home magazines are setting up as a goal and doing all they can to secure acceptance of that goal among their readers.

We are mutually interested in doing all that we can to increase the percentage of home-ownership in the United States. There are reasons of sufficient importance on the social side alone to make this ideal extremely desirable for all of us, but I am going to pass this consideration, and will attempt to discuss the problem from the standpoint of markets exclusively.

In the first place, it seems to me extremely desirable that we briefly review the history of the country so far as home-ownership is concerned in order that we get firmly in mind the background upon which the problems of this year, 1929, rest.

For more than seventy years, commencing in 1850 and continuing down past 1920, we witnessed a humiliating spectacle of a continual slump in the percentage of owned homes in the United States. In 1850 there was a higher percentage of home ownership by nearly 11 per cent than there was in 1920. This in spite of the fact that there had been a tremendous increase in per capita wealth in industry, in business, in population—in fact, in practically every activity in which we interested ourselves.

The per capita wealth in 1850 was $308; in 1920, it was approximately $3000; and, in 1928, it was estimated to be approximately $3600. It seems to me that this very fact tends to answer the argument so many people advance when they say that "Of course we would own our own home if we could afford it, but we haven't the money." I submit to you that it was many times easier to own one's home in 1920 when the per capita wealth alone was ten times what it was seventy years before, to say nothing of the large number of financing agencies available today, tending to make it comparatively as easy to buy a house as to buy an automobile, a radio, or a suit of clothes.

So, it hasn't been a lack of money. In 1850, when a man got a home, he pinched

Mr. Sherlock is associate editor of the Ladies' Home Journal.

The detached house is a prospect for all the services gas renders

it out a dime, or a quarter, or a dollar at a time, and he was willing to wait twenty years if necessary, but he got his home and in a more considerable per cent than we did in 1920.

The slump in the percentage of owned homes has not been due to a lack of adequate building materials. In 1850, except in a few favored localities, we were limited almost entirely to lumber, but as time went on stone and brick and masonry forms of construction were actually rediscovered and came into being as they had been in the older countries of the world for centuries. We have more permanent building materials today than we had then. In addition, there has been tremendous attention paid to the processing and manufacture of new combinations of materials for use in building, which has greatly multiplied the materials available for construction.

It hasn't been a lack of available land. Actually, in 1920 we had a great deal more land available for home-making than we had in 1850 simply because the development of newer methods of rapid transportation, such as the automobile, the trolley car, the railroad, the subway, and the like, have actually "discovered" vast new tracts of land adjacent to conjested areas, and rendered them available for home building.

The slump in home-ownership was not due to the lack of skilled labor. While it is true that perhaps more householders were prompted to build their own homes in 1850 than they were in 1920, the fact remains that the number of skilled artisans and craftsmen is vastly greater today than it was then.

Since none of these elements could have contributed to the decrease in home-ownership, what is the explanation for the fact? It is simply this: It has been a lack of incentive. We have quit wanting a home as badly as we wanted it in 1850.

I submit to you that this is a problem in which we are all vitally concerned. If the percentage of owned homes is constantly to decrease, it means a diminishing market for editors of home magazines, and a diminishing market for those of you manufacturing products, materials, and services which must look to the American home for their outlet.

I feel sure that if I were to come to you and propose a plan whereby we could increase the number of rooms occupied by the American family by just one room that you would be tremendously thrilled, because you would see in that movement an opportunity greatly to expand the market for your products and materials, and yet experience shows that when you succeed in luring a family from an apartment or family hotel into a house you have not only increased the average number of rooms occupied by that family by one room, but by two or more rooms.

(Continued on page 122)

In a home like this people can enjoy all that gas can do in the modern home

Training Workers—Organization and Method

By M. J. KANE

MR. KANE presented this address at the convention of the Trade and Industrial Section of the American Vocational Association, held recently at Philadelphia, Pa. The publication of the material in the A. G. A. MONTHLY has been requested by the Committee on Education of Gas Company Employees, and is approved by the A. T. & T. and the Vocational Ass'n.

E. B. Luce, a past chairman of the American Gas Association's Committee on Education of Gas Company Employees, reports that this paper aroused animated discussion at the educational convention. Mr. Kane deals with the fundamentals of training in industry, and behind his remarks is a wealth of reflection and experience which will be beneficial to the gas industry.—EDITOR.

EVERY job in industry makes a performance demand on the worker. Each worker has to some degree qualifications to meet this demand. Where the individual worker's qualifications do not fully enable the job performance demands to be met, the worker is laboring under a handicap. This handicap manifests itself in lower production, both as to quality and quantity, and in increased cost of production. These handicaps can be classed under three headings:

1. The worker may lack knowledge of the job itself, or not be able properly to apply the knowledge possessed to the job.

2. There may be a lack of skill or of the manual dexterity necessary to perform the work effectively.

3. There may be the wrong viewpoint or frame of mind. Any of these conditions will prevent the individual from making the best contribution to production of which he or she is capable.

In view of these handicaps, it is necessary to determine who in an organization has the greater number of handicaps or the more serious ones. The effort to reduce these handicaps constitutes the training of any working force. These handicaps will be found in groups of people as follows:

a. People who are facing changed standards, routines or processes.

b. Those who take on new work.

c. Those who are not producing the acceptable standard of work for the job held at the present time.

Any organization must determine into which of these groups the greater number of its people fall. Considering each of these indicates that the new people taken on constitute only a small portion of the training that should be done. If the third group (c) is considered, we will find that the older members of the working force have varying handicaps, and, being in point of number far greater than the new people, constitutes the biggest problem in training.

There is another condition to determine: What means are used at present to reduce job handicaps? For, after all, this is the purpose or aim of training. Obviously, this training must be done either on the job itself or at some place away from the job. In either event it is probably carried on by one or the other or some combination of the following mediums:

1. Letting the man reduce his own handicaps, which means train himself.

2. Having special instructors carry on intensive training.

3. Having the foreman or first line supervisors do this training.

4. Indiscriminate use of other workers to do the training in addition to their regular work.

It may be that in any industry all of these mediums will be used. It is certain that there is a greater use made of the first and fourth than can be warranted

Mr. Kane is engineer of plant training of the American Telephone and Telegraph Co., New York.

by the results secured. The drawbacks that are attached to letting a man determine his own handicaps and train himself to remedy them are apparent. It is equally true that utilizing fellow workers unequipped for training work in addition to their regular job assignment does not lend itself to satisfactory results.

WHAT DOES VOCATIONAL TRAINING COVER?

In order to avoid misconceptions, a definition of what vocational training embraces will help. Until an individual who is given particular work can perform that work in a perfectly satisfactory manner, he does not fully meet the vocational demand. Then it follows that vocational training can be defined as that which applies to the reduction of actual handicaps for any given work. Anything which is essentially part of a job demand, or which is required successfully to meet the job demand, is legitimate vocational training. Anything outside of that field is not vocational training in the sense that we use the term, although it may be a form of training in itself. The aim of vocational training is to make a worker proficient in meeting the actual job demands. This covers a broader field than would be supposed at first thought. Obviously, a well-balanced training program in industry would not be complete if it were limited to vocational training as defined. There must be provision made for the general development and for the advance preparation for new work, if the organization is successfully to perpetuate itself. The question of what constitutes vocational as against general training can be quite definitely answered by an economic measure. Vocational training should always be done on actual payroll time, and as soon as handicaps are manifest. There is nothing voluntary on the part of the individual in connection with vocational training. It is compulsory, for the reason that the production suffers while handicaps are manifest. General training on the other hand can be given in out of hour time or by agencies outside of the industrial organization. On this basis, limiting vocational training to the actual job demand is good business. Attempting to carry on vocational training out of hours and on the voluntary enrollment of the individual worker is poor economy. Industry cannot afford to wait until a man determines his handicaps and decides to remedy them.

WHO IS RESPONSIBLE FOR VOCATIONAL TRAINING?

In industry there are two distinct functions on the managerial side. There is the line organization which actually carries out or executes the work which is before the organization. Then there is the staff composed of specialists in particular phases of management who advise and aid the line organization. On the staff organization there probably should be a specialist on training. There can be no question of where the actual responsibility for training lies when consideration is given to the fact that the line organization is always responsible for results. Thus, vocational training fits squarely into the function of the line organization, and it must carry on the greater part of the actual training. There is a chance for confusion of thought on this responsibility when a staff activity sets up centralized schools. If the thought is kept in mind that these agencies are only an aid in reducing the burden of training on the line organization, even this confusion of thought will be eliminated. There never can be a condition which takes away from the line organization the responsibility for the work performed. As training has for its chief aim the improvement of work performance, the responsibility for training can never be taken away from the line organization.

ORGANIZING TRAINING

Vocational training is now going on whether we are aware of it or not. It is costing a great amount of money that is difficult to isolate because it all lumps

up in operating costs. Where time, effort, and costly material are being applied in vocational training in a haphazard, disorganized way, quite often the results only aggravate the errors of performance. This manifests itself in unsafe practices, use of wrong methods, poor working habits, and wasted material and time.

a. It is mostly *corrective*. Most workers receive instruction from their supervisor only when unsatisfactory performance shows the need for it. The tendency is chiefly one of correcting mistakes.

b. It should be *preventive*. The demands of the job are known. The qualifications of the individual worker should be known to his supervisor. The difference between his ability and the demands of the job should be supplied to the man as he is assigned the work.

c. The chief difficulty with the corrective procedure is that it opens the way for wrong habit formation. So long as the product meets the requirements of the supervisor the manner of accomplishing it is O. K. Many of the great differences in working practices can be attributed to this manner of training.

The common sense way to improve these conditions where they exist is to set up a systematic vocational training program and measure the subsequent job performance, which always has been subject to accounting measurements.

Knowing that training cannot be avoided and realizing the immediate need for improving it clearly shows the desirability of systematically organizing to carry it on. The organizing of vocational training can be very simply stated. It is achieved when the line organization, aided by the staff organization, has:

1. Determined what each job demand is.

2. Laid out a course of progressive assignments which are to be mastered by individuals.

3. Decided definitely what portion of the work of training will be done on the job and what portion in a centralized school.

4. Trained and assigned competent people to teach effectively and to fix firmly the correct work practice of these assignments.

5. Accurate records of the progress made by instructors and workers.

6. Set up proper supervision of instructors to assure the continuance of the program.

While the statement of organizing for vocational training can be quite simply made, the process of setting it up is not as easy to execute. There is the vital need for building up an appreciation of the training requirements and the value of different mediums for training in the minds of the line organization. Following its appreciation, an actual realization of the line responsibility in this connection must be achieved. A coherent training program to qualify properly selected individuals to do good instructing must be set up. There must be a means established which will enable the line supervisors more effectively to direct and guide these instructors. Most of this can well be started by beginning to give proper training to the instructors who are going to be used. Usually a considerable number of prospective instructors will be in the line organization as foremen. By their actual demonstration of improved production results due to good instruction, the best progress in the line organization's appreciation can be made. If the whole program is motivated on the problem of having the line organization pick out prospective instructors, determine what is to be taught, and decide where the training is to be done, then a good beginning can be made in covering the needs which were outlined above.

TRAINING INSTRUCTORS

It has been said that some men are natural born teachers and that unless they are so, they cannot make good instructors. This, however, is not now accepted as a fact. Any man with certain qualifications is a good prospect for training as an instructor.

The instructor prospect having been chosen, it requires about four weeks to give him the principles of the teaching

process and an appreciation of the methods to be used. It is assumed, as noted in the qualifications above, that the man is thoroughly competent in the performance of the duties of the craft he represents. The four weeks' training period is sufficient only to teach a man the things he should know about instructional work.

This should equip a foreman with the essentials of the following: *What* he is going to teach, *when* he is going to teach it and *how* he proposes to make certain that the man being taught has the ideas which it is desirable for him to have.

AFTER TRAINING COURSE SEASONING

It must be recognized that a man upon completing the four weeks' instructor training course is not a fully trained instructor.

The second phase of training, supervised practice, which is as applicable to the training of an instructor as to the training of a workman, should follow. A period of "seasoning" during which the instructor develops confidence in himself, in his course, and in the efficiency of the teaching methods and principles he has been taught is vital. During this period every handicap possible of elimination should be removed. He should receive competent supervision. Care should be taken that he forms good instructional habits. His efforts should be concentrated on instruction. There are definite advantages gained in teaching ability and conservation of learner's time by permitting the instructor to "season."

When an instructor has completed his "seasoning" period, the length of which will vary for each craft and each plan of training, he should be marked by certain characteristics which are outlined below.

1. He must know his subject well. Must have skill enough to demonstrate but need not have maximum speed.
2. He must know the teaching process and be able to plan effective lessons. This connotes job analysis, teaching content, learning sequence, etc.
3. He must have the ability to make use of the teaching methods and policies best suited to the conditions.
4. He must be able to set up and follow a definite course of learning assignments.
5. He will have had successful practical experience as an instructor.
6. The trained instructor should be able to advise with the supervisory organization as to the vocational training needs of the craft he represents, as to the plan and agencies to be selected for the training of the men in that craft, and as to the sequence in which the men are trained. It is suggested that the line organization confer often with its instructors in the development of the administrative machinery of vocational training.

WHERE TO TRAIN

In order to have a clear conception of the training grounds available, it may be well to list briefly the advantages and disadvantages of the centralized school and the job training.

Centralized School

Advantages

Better control of teaching conditions
No interference with production
Supervision easier
Permits training in advance of production
Permits setting up conditions at will

Disadvantages

Non-productive. Men removed from production
Classes of work taught are limited
Requires duplicate equipment
Delay in application
"Cold Storage" learning
Isolation from field conditions undesirable
Man and instructor removed from line control

On the Job Training

Advantages

Training activity placed where responsibility rests
Actual field condition met
The Job is perfect Laboratory
Direct production obtained from learner
Immediate application is possible
Ample opportunity for practice—habits formed
Producing retains learner's interest
No additional equipment required of training
Eliminates one adjustment stage

Disadvantages

Some interference with production
May be unfavorable customer reaction

(Continued on page 120)

The American Gas Association Testing Laboratory at Cleveland, Ohio

The Organized Gas Industries of the World Turn to the Cleveland Laboratory

SINCE the establishment and successful operation of the American Gas Association Testing Laboratory, at Cleveland, Ohio, has been so generally and generously hailed one of the most noteworthy steps ever taken by the gas industry, or any other industry, and the rapid and sure success of the laboratory idea is little short of record-breaking, it is not surprising to find other countries seriously considering the establishment of similar institutions for the benefit of their business and of the customers whom they serve.

Recently there have come to the notice of the American Gas Association several instances of more than casual interest in the work now being conducted at Cleveland. It is significant that in the last two years there has scarcely been a foreign gas man visiting the United States who did not express himself as being particularly desirous of visiting the Laboratory. All have praised the institution after they have seen the work it is doing.

Already the Canadian gas industry has seen the benefits of a national testing agency, and the A. G. A. Testing Laboratory is today working not only for the natural and manufactured gas users in the United States, but for those in Canada as well.

The English gas industry has shown deep interest in the Laboratory, if the editorial and news columns of the trade journals are true indicators. Editorials have appeared in these papers praising the A. G. A. Laboratory, and there have also been articles telling of what the Laboratory is actually doing.

Indicative of the interest being shown by the English gas industry are the remarks of J. G. Clark, engineer of research and training, London Gas Light and Coke Co., at the dedication of the new Laboratory building last September. In part he said:

"It is well and often said that science has no frontiers and I always feel that the gas industry is an important branch of science and has no frontiers.

"That inscription indicates to me that perhaps we on the other side of the water may get a few crumbs of useful information from you and I can assure you we will not fail to take advantage of it.

"I have had the good fortune of looking over this institution somewhat in detail, and I was struck at once with the fact that your problems are similar to ours. We feel that we have a very good commodity to sell—gas. It is one of the finest fuels the world has ever known when it is used properly. It is efficient, economical, safe and healthy with proper use. That brings us to the whole crux of the problem—when it is used properly."

At a recent meeting of the Midlands District Gas Salesmen's Circle, at Birmingham, England, R. J. Rogers, chief superintendent, Birmingham Corp., gas fittings department, commented on the

idea of a national testing laboratory as follows:

"I have for many years—in fact, ever since 1911—advocated the need for a national testing laboratory for the industry. Such a laboratory would be able to issue advice and unbiased tests which would do much to eliminate unsatisfactory apparatus from the market today, for we must remember that once schemes of maintenance are embarked upon, the question of shoddy apparatus becomes vital to every gas manager. Today we deplore them, but if a scheme of maintenance is to be effective it must be universal and we must be prepared to undertake maintenance of all types of appliances.

"If the national testing laboratory were in existence the gas manager would feel quite safe in taking on to maintenance all types of appliances approved by the laboratory, and any portions of appliances—such as brasswork—which proved unduly costly in maintenance would come under the censure of the laboratory, and that would no doubt lead to their alteration and reconstruction."

At the same meeting S. H. Wakefield, of South Coldfield, also supported the suggestion of a national testing laboratory. The London *Gas World* reports him as "having a case of an appliance with the American laboratory seal upon it, and there was no doubt that it gave confidence to the customer and to the salesman."

The same issue of the *Gas World,* Nov. 3, contains the following editorial:

"We welcome Mr. R. J. Rogers' support to the proposal for the establishment of a central appliance laboratory whereby the use only of efficient gas apparatus would be ensured. In our issue of 6th October we gave an account of an interview by our special correspondent with the managing director of the American Gas Association, in which that gentleman (Major Alexander Forward) said: 'The A. G. A.'s testing laboratory in Cleveland by its seal of approval has become the hall-mark of safety of domestic gas burning appliances.' Are conditions so very much different in the United States that we can afford to do without this safeguard? Is it true, as Mr. Rogers asserts, that unsuitable appliances and shoddy taps and fittings are bought by gas undertakings? We ask these questions because they are of concern to the whole industry, and the remedy seems to be to insist upon the hall-mark of a central testing station. But so long as the central station is non-existant, so long must the industry remain impotent to insist on its hall-mark. If it is good for 'one or two large gas undertakings to go to great expense in testing appliances and fittings before accepting them for use in their own district,' it is better that the whole industry should have every type of appliance which it supplies scrutinized before acceptance for use. It would be interesting to know what becomes of the 'rejects' of the large undertakings which practise appliance testing. Are these foisted on the undertakings which undergo no such testing? We think the industry is big enough to have one, if not more, appliance testing laboratory established to which any undertaking, big or small, may have recourse for an impartial certificate of performance."

Great interest was being shown in the establishment of our testing laboratory by the French Gas Association, according to Jean Bing, well-known French gas engineer, on his recent visit to A. G. A. Headquarters after a visit to the Laboratory. Mr. Bing commented on the manner in which work was conducted at the Cleveland institution, and said that the application of certain scientific principles was of great interest to him personally.

He also said that the establishment of some method of testing and certifying gas appliances is under most serious consideration by the gas industry of France, and interest in our undertaking is general and insistent.

A. G. A. Headquarters has had many inquiries concerning the Testing Laboratory, and most of these have asked for information that would be of help in assisting other organizations to establish similar institutions.

Purdue to Have Indiana Fuel Conference

THE second annual Indiana Fuel Conference will be held at Purdue University, Lafayette, Ind., April 4-5, according to a recent announcement of the University.

This will be a two-day educational conference, devoted to commercial and domestic fuel problems. Inquiries should be addressed to the Engineering Extension Dept., Purdue University, Lafayette, Ind.

100 Attend Southern Sales Conference

By A. G. A. STAFF MEMBER

ON January 15-16 approximately 100 attended the second Southern Regional Sales Conference at the Atlanta Biltmore Hotel, Atlanta, Ga. An interesting and varied program was given at the conference by speakers fully qualified to present the subjects assigned to them.

C. S. Reed

P. H. Gadsden

The second Southern Regional Sales Conference was a decided success, and all attending expressed themselves as being in favor of the continuance of the annual regional conference. These conferences are sponsored by the Commercial and Industrial Gas Sections of the American Gas Association and by the Southern Gas Association. C. A. Collier, vice-president of the Georgia Power Co., Atlanta, Ga., and chairman of the Southern Regional Gas Sales Council, presided at the sessions.

Following a warm address of welcome by Jackson P. Dick, assistant general manager, Georgia Power Co., and the opening remarks by the chairman, W. E. Mitchell, vice-president of the Georgia Power Co., addressed the conference briefly on the importance of sales work.

"Mrs. Jones Buys a Water Heater" was the title of an interesting paper on rates presented by C. S. Reed, rate consultant of the American Gas Association. The speaker attacked the rate problem from the standpoint of the commercial man, and by constructing several different types of rates showed how each would affect the cost of operation of a gas-fired water heater.

Howard Williams, of the Business Training Corp., New York, N. Y., next addressed the conference on the A. G. A. Training Course in Domestic Gas Salesmanship. He stressed the greater importance of adequate sales training as a result of the greater competition existing in all markets for the consumer's dollar. He also reviewed the features of the course, and told of the extremely favorable reception the course was having with executives, sales managers, and salesmen. In the speaker's opinion this popularity of the course is the strongest testimonial it is possible to secure.

The afternoon session on Jan. 15 was devoted to an inspection trip through the plant of the Chevrolet Motor Co. Here the delegates saw gas utilized in many ways for many purposes.

In the evening the annual conference dinner was held.

The morning session on Jan. 16 opened with an address on "The Gas Industry and the South," by P. H. Gadsden, vice-president of The United Gas Improvement Co., Philadelphia, Pa. Mr. Gadsden pointed out that one of the most important ways in which the industry can meet competition, the new form of competition today, is to create new uses for gas, thereby making it available to more people in more ways.

The speaker also stated that the gas industry is no longer a monopoly, since gas is in strong competition with coal, fuel oil, coke, electricity, and other substitutes. This makes the job of the salesman all the more important, Mr. Gadsden asserted.

"What Should We Expect from Advertising?" was the title of an address by J. M. Stafford, Jr., of the Georgia Power Co. In this paper the speaker reviewed the subject of what to spend for mer-

chandise advertising, and how to spend it. In his opinion the newspaper is the most valuable medium for gas company advertising. Mr. Stafford also spoke of the relationship of advertising to personal selling, and said that while advertising may not sell merchandise directly, it does lend strong support to personal selling.

In concluding he stated that "Advertising is simply one of the tried and proven tools which merchandise engineers employ."

J. W. West, Jr., secretary of the Commercial Section of the A. G. A., read the next paper, entitled "Symposium of Successful Selling Campaigns." This had been prepared by W. L. Plummer, of the Geo. D. Roper Corp.

This paper was a comprehensive summary of certain sales campaigns in the South. The following were covered:

Nashville Gas & Heating Co.—"Combination Sale on All Gas Appliances," and "Wanted, Old Stoves and Water Heaters."

Birmingham Electric Co.—"Tank Heater Sale."

(Continued on page 121)

What Is 100 Per Cent Gas Range Efficiency?

AN appreciation of the true value of gas in the home, a knowledge of gas sufficient to eliminate fear of it, and a thorough understanding of all parts of the range, are the three factors to be considered in teaching women how to get 100 per cent efficiency from their gas range, according to Ellen Brooks McCleary, home service director, Hyde Park Gas Co., Scranton, Pa.

"The home service director must give all this to the customers, if she expects them to become boosters for gas service and the all-gas home," says Miss McCleary.

"After a range is installed in a home I call and do my best to teach the housewife to value her range by pointing out the Laboratory Seal, telling her what it means and why it is on her range. Then I explain how gas is manufactured, how she is buying heat units, and how an efficient flame is dependent upon air. I tell her about the A. G. A. Laboratory at Cleveland, Ohio, and explain how this institution tests and approves appliances for conformity to basic standards of safety.

"I explain about the burners; I show her how to clean them. I call attention to how perfectly the screws are made, and how the manifold and valves are tested for possible leakage later on. I explain the primary air and secondary air and drill her by demonstrating the size of the flame that will give the best heat test. Then I help her to become thoroughly familiar with the broiler and encourage her to use it frequently. If there is a heat control on the range, I show her the rod and explain the simplicity and accuracy of its action. I test it for her and if necessary adjust it. I try to make her recognize a faithful friend and servant in gas and she is always delighted.

"I ask her if she has ever stopped to think how the gas is piped to her direct, without storage, how she pays only for what she actually uses, and how necessary is an appreciation of its habits. I seldom leave a home without an invitation to come again for a visit, and when I tell her how beautifully she can keep a range she invariably asks me to stop in again so that she may show me that she is taking care of it."

Last fall, with the permission of the local superintendent of schools, Miss McCleary talked to all the domestic science classes in the public schools. She explained the Laboratory Seal, displayed a burner from a range, explained how to light a gas flame, and how important it is to keep burners clean. Both teachers and girls were interested and appreciative.

Development of Industrial Sales and Building a Rate to Get the Business

By H. C. MEADE

IN the marketing of natural gas, along with the development of the domestic and commercial business, it is essential that the industrial field be cultivated to the fullest possible extent, especially so when the gas has to be transported for a long distance to reach its market. Industry is the long hour user and makes for good load factor, which is necessary for the financial success of any pipe line project or distribution system.

It is not the purpose of this paper to lay down any formula or set of rules for developing this industrial field but rather to discuss certain fundamentals that have been tried and found sound.

When natural gas is about to be introduced into any large community, it usually finds a territory with domestic and commercial business quite highly developed on a manufactured gas basis. The problem is, therefore, to maintain as much as possible of the business already developed in the commercial field and to develop all additional business, both commercial and industrial, made possible and necessary by the advent of natural gas. In smaller communities, where manufactured gas has never been distributed, the problem, in essence, is the same; it is equally necessary to attach all the business from the poorer load factor, higher cost, classes of usage while simultaneously building up the load factor by attaching the maximum possible amount of industrial business.

The first difficult problem which a distributing public utility will encounter in the change from the sales of manufactured gas to the sales of natural gas is one of a greatly increased calorific value of natural gas over the manufactured gas, and the constant demand for a lower price per thousand cubic feet for natural gas. Nobody apparently appreciates that the gas company is selling heat units which unfortunately cannot be measured directly but are measured by the number of cubic feet registered, which consequently must be multiplied by the heat units contained per cubic foot. This is by far the most difficult problem which an existing manufactured gas distributing system encounters in changing from manufactured gas to the distribution of natural gas. The change is probably never considered from an economic viewpoint, and history has shown that in almost every instance the distributing company is compelled to lose a great deal of money following the introduction of natural gas, and until it can either develop sufficient good load factor business at fair rates to compensate for the loss of the domestic utilization or else the rates must be adjusted upwards after a fair trial.

The next question is, therefore: What prospective business is in sight? the third, what revenue does it offer—what rates will get the business? and the fourth, What will it cost to serve it?

The answer to the second question, what business is available, is developed by a thorough and complete survey. In making a survey, in order to avoid possible omissions, it is convenient to divide a given territory into districts and to assign to each district a number such as is used in the decimal filing system. Then in district designated as 100-200, the first industry surveyed would be 100, the second 101, and so on, while in district designated as 200-300, the first industry surveyed would be 200, the second 201 and so on. Some such system simplifies the location of prospects on a map and readily lends itself to checking and geographical filing. Further means of identification can be added for allocation into typical

Mr. Meade is with the New Orleans Public Service, Inc., New Orleans, La.

This paper was presented at the meeting of the Southwest Division, Natural Gas Dept., Shreveport, La.

classes, and for building load data necessary in laying out mains or extensions to distribution systems.

The individual survey sheet for each prospective industrial or commercial consumer should contain name, address, graphical sketch of location showing bounding streets, type of industry, name of correct party to see (this is important), record of fuel used by years to indicate growth, and by months for the last year, the maximum rate of use, both hourly and daily and when occurring, a description of the fuel-using equipment, cost and kind of fuel, storage capacity, average fuel stock carried, handling charges of present fuel such as labor, power and maintenance of equipment. A full description of prospect's method of operation should be obtained, giving number of hours per day, days per week, and months per year with seasonal load fluctuations. The back of the survey sheet can be used for remarks and can carry a complete contact record and history of operation.

With the survey completed we have the means of answering our second question, what business is available? Inasmuch as a territory of considerable size offers a varied number of industrial prospects differing widely as to load characteristics and prices paid for fuels, it is necessary to segregate them into typical classes. It is not possible to set down hard and fast rules for classification that will apply in all territories, but since our first problem is to find what business is available a segregation into classes of business such as Ice Manufacturers, Alcohol Distilleries, Industrial Bakers, Building Heating, etc., is logical. A further classification according to features of competitive fuels is helpful, such as type of oil delivery, whether tank wagon, tank car, barge or tank ship. The purpose of the segregation is to get a clearer picture and make possible closer study to determine load characteristics and the possible revenue.

A tabulation made from survey sheets for each class of industry showing the name and type of industry, present fuel usage and equivalent gas for each of the twelve months, total for the year, dollars paid for present fuel, and average competitive rate per MCF for gas, presents a cross section of the value of the service to the prospect.

In determining the amount of gas equivalent to the other fuel used, it is helpful to study in detail one or more of the most efficiently operated industries of each class. A flue gas analysis, with stack temperature, and notes made on the job, are helpful in determining how efficiently the fuel is used. In the sale of gas for industrial purposes the leading factor is fuel economy, and it is important to realize that the relative value of gas as compared to coal or oil is not found entirely in a B.t.u. comparison. In the case of oil there are many other factors that must be taken into consideration in addition to the B.t.u. content per bbl. of oil, such as per cent of water per bbl., losses in evaporation, B.S., and spillage, greater amount of excess air, higher stack temperature, use of steam or power for atomization, unburned carbon, steam for oil heating and power for pumping, higher maintenance on furnace walls, tubes and stack. The theoretical thermal equivalent of one bbl. of oil is about 6300 cubic feet of natural gas, and, in the most efficiently operated large boiler installations, this theoretical figure is attained in practice. However, in smaller and less efficiently operated boiler installations, and in many process applications it is possible to burn gas more efficiently than oil, and therefore for the general run of industries the volume of gas required to do the same work as one bbl. of oil is less than the theoretical 6300 cubic feet. However, for purposes of the industrial analysis the industry of each class which uses present fuel most efficiently should be selected. If the gas rate is designed so as to be competitive with other available fuels for these key industries, it will be better than competitive with the others.

The tabulation showing the value of the service to the prospective consumer sets the upper limit of the rate. Using ordinary graph paper with the abscissa or base denoting per cent load factor and the ordinate denoting cents per MCF, the competitive price per MCF for each of the typical classes can be plotted against the average load factor of each class. Individual industries can be plotted if desirable using a color scheme to identify the various classes. A curve drawn through these points gives a graphical picture of the value of service to the prospective business. The next step in the study is to find the cost of the service, and this is just as important as knowing the value of the service, since for some classes of business the cost exceeds the value. Therefore, our fourth question, what will it cost to serve the business?

From our survey sheets we can extend the tabulation showing the average competitive price per MCF for these prospects, so that it will include the load characteristics of each industry, the number of prospects and the load characteristics of each group of industries, including total group consumption and total group maximum hourly and daily demands after having made proper allowance for diversity between individual industries. This provides the essentials for estimating the cost to serve, when unit costs are known.

To connect the average consumer to a gas supply, money must be invested by the company in pipe lines, meters, etc., and since our capital is turned over only once in four or five years, the capital or investment costs are most important. It makes no difference whether the pipe line or distribution system was built for the particular consumer or project; the fact that there is capacity to handle the particular load means that money has been spent. The money spent was invested in physical equipment, and there is, therefore, a consequent annual, fixed, expense to be paid. This fixed cost consists of taxes, retirement reserve, and the cost of money or fair return on the invested capital. In addition to the fixed or investment costs there are the out-of-pocket operating expenses necessary to make the investment function and deliver the commodity how, when and where needed, and finally the cost of the commodity itself. Due to the fact that manufactured gas has not as yet been developed to take on the maximum gas business in competition with other fuels, the investment turnover is as stated. One can readily see the very great importance of adding business which will greatly increase the use of the investment and thereby increase the rapidity of the turnover from once in four or five years to once in three or less.

Equitably to apportion these costs between consumers it is necessary to separate them into cost factors, which cost factors are brought into being by the characteristics of the service demanded by consumers. These costs fall logically into three divisions, namely: Demand costs, customer costs, and commodity costs. Much has been written concerning these cost factors and detailed instructions published as how to allocate them so they will only be mentioned here for purposes of review.

1. *Demand Cost*—The demand cost includes that portion of the fixed costs which are attributed to the proportion of the total investment necessary to meet the maximum hourly and daily demands placed upon the property. It consists of that part of the company's expense necessary to provide and maintain a production, transmission and distribution system of sufficient capacity to render the kind of service demanded by the consumer. This cost is in proportion to the total of all the customers' demands and, therefore, should be apportioned between customers in the ratio that each contributes to the total.

2. *Customer Cost*—The customer cost includes the fixed costs on that part of the investment whose magnitude is in direct proportion to the number of customers served, such as the value of meters, services, a portion of the mains, etc. It also includes the cost of meter reading, billing and collecting, keeping customers' accounts, free complaint service, setting, removing, changing, testing and repairing meters and all those costs of like nature caused by customers' needs, and

which vary with the number of customers served.

3. *Commodity Cost*—The commodity cost includes those costs which are measured by the amount of commodity (natural gas) handled and which vary directly with the extent of use of the commodity.

After these three cost factors have been allocated in total, then average unit costs are found by dividing by the number of units. The total demand cost is divided by the demand on the system, the total customer cost is divided by the number of customers, and the total commodity cost is divided by the total commodity handled. In the case of the unit customer cost, it must be remembered that the cost found as above is the average customer cost and for certain large customers the customer cost may be considerably higher than the average due to a larger investment and greater service cost, as reading meters weekly, etc.

The application of these unit costs to the load characteristics of the typical classes of business, as set out in the survey tabulation, clearly determines the cost to serve. Knowing what the service is worth to the prospect and what the cost to the company is, intelligent rates can be designed. While the prospective business was grouped in classes for ease in studying, it does not follow that it will be necessary to design class rates. It may be possible so to proportion the demand charge and the first blocks of the commodity charge that one industrial rate will fit all classes of profitable business and exclude unprofitable business.

For the intermediate business, lying between the industrial and domestic, usually called commercial, and consisting of the neighborhood bakery, restaurant, small boilers for pressing machines, clothes manufacturers, and miscellaneous small loads, carrying a relatively higher value of service, a general commercial rate should be designed. This rate should carry relatively higher investment protection or demand charge, because the business served under it is fed from the low pressure distribution system and because commercial business is otherwise more expensive to handle than industrial business. The higher demand charge develops adequate revenue from the miscellaneous poor load factor commercial consumers, and a sufficiently low commodity charge makes the rate competitive with other fuels for the large, high load factor user of this class. Such a rate should be designed to work smoothly into the industrial rate without an abrupt transition point. This method of rate structure finds precedent in the electric business where it is general to have one rate for small miscellaneous power and another rate for large power. The greater investment per unit of capacity necessary for the smaller miscellaneous business together with the smaller use of that capacity makes the cost of service to small miscellaneous power customers considerably higher than to the large high load factor power user. It has the great advantage that the consumer is billed at the rate earned for him by his operating conditions, rather than put in a class because of the nature of his business. Irrespective, however, of whether the solution to the rate design problem lies in class rates or in one or more general rates, there should be embodied in the rate, protection to the company's investment which it is dedicating to public use. When the value of service to a class of business does not allow of including in the rate, in addition to the commodity cost, the out-of-pocket operating expenses to the company plus some portion of the overhead, it cannot be served profitably either to the company or to other consumers. As mentioned before, in the marketing of gas for industrial purposes, the determining factor is fuel economy, and designing the rate to give investment protection to the company does not make the rate any less competitive.

A public utility is primarily a sales organization engaged in selling service to the public. The nature and cost of the service demanded by and for the consumers in the smaller classes of business

(Continued on page 126)

The College Graduate and the Job

By HARRY J. BURTON

The author gives helpful hints for employer and employee alike.—Editor.

IT used to be a matter of profound wonder to me why so many men graduated from college without knowing why. The graduate often cannot tell why he went to college. He has no definite plans as to his future life work.

In reply to a direct question as to what he intends to do, he will answer, "Oh, you know what a college graduate expects." Or he might say, "Anything at the start." Ask him to name the job he would pick if given his choice. You will find that he cannot give anything like a definite account of what he would like to do. He sometimes has an idea of what he expects to do eventually, but he has no plan as to the best way to occupy his time in the interval.

The point I want to make is: Seniors do not start to think definitely about jobs until after they graduate. I will agree that a lot of time is put in on the subject before graduation, but the average student graduate is far from having a definite idea as to what he intends to try and do as his life work.

I said in the beginning that I used to wonder about all this; now I know from experience that the new graduate's knowledge of the nature and requirements of the field of work he should be most interested in is most hazy and frequently incorrect. He may form an opinion of a job by observation of the behavior of a prominent man whom he may know, the thought being, "Well, if he can hold a job like that, I should worry." He often does not realize that the case under observation is exceptional, or that the job is not held because of the trait or quality observed, but in spite of it.

The question of character is nearly always under-estimated by the graduate. He is sure that "hard-headed business men" are not interested in personal habits, especially when shop or plant jobs are concerned. There is no question in my mind but that character is a most important factor. Dean Cooley, of the University of Michigan, has said that the requirements for a successful engineer are: "Ninety-eight per cent character and honesty, one per cent tact, one per cent technical training."

Good health is an essential quality for almost any job. The Mann report of the Carnegie Foundation, published some years ago, indicated that the qualifications for the senior job-seeker, stated in the order of their desirability, are as follows: "Character, judgment, efficiency, understanding of men, knowledge, technique." Study this list and measure or rate yourself before applying for a job. Are you reliable? Are you a good teamworker? Do you inspire confidence and go out of your way to assist others? Are you willing to do more than is required? Are you accurate? Are you levelheaded? Economical? How about your technical knowledge?

You may ask the question, "Just what is expected of a graduate; what may he expect?" Let us put the matter to a test. An executive is sitting in his office. Some recent graduates are without, waiting to be interviewed. They are senior job-seekers. One is called into the office. He slouches in, hat on head. He does not know what he wants, but can do anything. He admits it.

The next one is called and starts in by stating that he has just spent four years studying electrical engineering and he immediately hands the executive the copy of his school record and references. The executive asks: "What did you do during vacations?"

"Worked in the old man's store, can-

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From the *Wisconsin Engineer.*

vassed a little, made pretty good money."

"Do you wish to get a job as a salesman?"

"No."

"What practical experience have you had along electrical lines?"

"None, outside of my work at college."

In reply to further questions he implies that although he has no definite idea of the job under consideration, he expects to reach an executive position soon and with little effort on his own part.

The next man called in says he wants work and wants it badly and that he is willing to do anything, and he adds, "Of course, within reason." He is a good talker, sold books during two vacations, played in a band at a resort one summer. When tentatively offered a certain job he "frankly does not want that kind of a job." He knows why he went to college and it was chiefly to get away from such work. He does not say just what kind of a job he does want and it may or may not be because he is too modest. The executive wonders why he went to college and studied engineering and also why he applied to an engineering concern for a job.

The next man is called. He is asked to be seated. In answer to a question he states simply and to the point that he is a recent electrical engineering graduate. He gained some little experience as a substation operator and as a trouble shooter. On being questioned further it is learned he also has had some transmission line construction experience, having worked during one summer vacation as a "ground-man." He would like very much to get some steam plant experience, both in the turbine and boiler room. "What branch of the work do you expect to follow as a life work?"

"When I have had enough experience I would like to be a designing engineer."

"Will you be content with that all your life?"

"I hope some day to become a public utility executive."

When questioned further regarding his desires and ambitions it is learned he has consulted not only the professors at college but some of the leading engineers in the country, either by correspondence or in person when they had visited the college.

The college record of the applicants interviewed was practically identical and they all "applied for" the same job. Who got the job? No, it does not matter what the executive had to offer. You can bet your bottom dollar he did not let one of the boys slip through his fingers.

What is to be done about all this? The answer is fairly simple. It is, start as soon as possible to have a goal in sight and train for it. The man who persistently aims at the bull's eye learns sooner or later to hit it. He will not continue to shoot all over the lot. You do not think of trying to make the team without practice. You would be laughed off the field. Work and play for the final result. Don't worry too much about it. Don't be afraid of making a wrong choice. A definite goal is better than none. All winds are unfavorable to a ship without a definite port in sight.

Actions speak louder than words. Sometimes you can hear neither because of clothes. Pay attention to details, shoes, fingernails. This does not mean that you have to put on a false front, and an affected manner. Deal with facts.

It is true jobs are often a question of supply and demand, but the right kind of a man can land one almost any time.

You can bank on this statement. If the graduate has character and an objective he need not worry. The fact that he is a graduate is sufficient evidence his technical training is, or should be, taken care of. Work we must, whether we have a college education or not. If we do not work with our hands we must toil in some other way. Should you get a job and find you do not like it, don't get dissatisfied with the job, get dissatisfied with yourself and look ahead and plan the next step of the journey toward your goal.

Office Ventilation

By W. E. WATT, A.M., Ph.D., Chicago, Ill.

HEALTH and efficiency depend on the qualities of the air. The number of absences in an office is increasing, and the poor work of the less skillful substitutes is cutting down profits. A casual observer is struck with the changes occurring from year to year. Men and women grow pale, anemic, nervous, constipated, and weak. Tuberculosis, pneumonia, and respiratory diseases generally cut down efficiency, attendance, and health, and occasionally a weaker or more susceptible one fails to rally and death ensues.

EDITOR'S NOTE

EVERY executive is interested in increasing the efficiency of his working force. Modern business has adopted safety programs for those who work under dangerous conditions, and modern business has profited by it. The executive mind has not been slow to grasp the value of this preventive action. Mr. Watt discusses another angle, that of the office worker and his health. Too little is said about the office worker, since his "desk job" is supposed to be devoid of danger. That this is not true is easily apparent when the author's remarks are digested.

This article is reprinted from a copyrighted pamphlet published by the National District Heating Association, Greenville, Ohio.

Strangely it seems to be the most skillful, clever, and valuable men and women who are keyed up to the highest pitch—the very ones we can least afford to lose—who are hardest hit. It is so very easy to make an office a death trap by appearing to add to its comfort that we do not realize its dangers.

FRESH AIR IS REALLY AN IMPORTANT FACTOR

All the animals in a zoo die of consumption except the few killed by their neighbors. Snakes, lizards, birds, and all manner of beasts are relatively short-lived in confinement. The lion has a radiator under his cage. He lies over it most of his time till tuberculosis makes room for another king of beasts. Cattle kept in tight barns in splendid sanitary surroundings develop tuberculosis. Calves born in a barn, compared with others born outdoors, are worth one-third less in the market.

An office that is too cosy will be kept cosy by the tender occupants, and they will insist on making it more deadly from year to year. Too much heat is weakening and it demands more heat as time goes on.

Such an office usually has a mass of air sewage riding overhead all day unable to get out. Between the evil effects of having an office too warm and having it retain its air sewage so it is rebreathed, it is not at at all surprising that office workers have many colds, are so tired that they make others weary when they enter the room, and have many days of absence in their yearly records.

Add to these conditions the act of the fresh air enthusiast, often the head of the office who takes much time out on the links and gets the real thing, who opens windows and pours cold air over the floor to freshen up the feet of his people, and you have an office where there is much bitterness among the force and the amount and kind of work done is far too expensive.

It goes up. Air that has been breathed is at body temperature, 98.6 degrees F.

It has a 2 per cent load of CO_2, but this is carried to the ceiling by warmth. If the upper part of the room is closed, it holds the air sewage overhead. The space is gradually filled from the ceiling downward till the breathing plane is reached and the foul air is rebreathed and goes up again.

Opening a window at the bottom does not permit the foul air to escape. The

lower sash ventilates the feet but renders slender service to the lungs. A "deflector" at the lower sash tosses up the incoming air without letting out the air sewage, for that hangs overhead. Deflecting devices break the force of the draft, but they merely toss the cold air upward and, as it is heavy with cold, it soon drops to the floor. They also toss in what soot and dirt has fallen on the window sill. Such of our clients as insist upon having clean air are asked to remove these dirt tossers. They may shut out this collection of city filth.

By opening a window a very little at the top you can let the air sewage escape and get a little fresh air in at a high point and so freshen the whole office. But don't open widely when the wind is against that side of the building. A mere crack is enough. You may have good air in any weather if you use judgment regarding the opening.

If a draft strikes anyone, reduce the opening. No one should endure a draft except the enthusiast who likes it for himself. With perseverance you will soon learn to open an ordinary upper window so there will be no draft.

Transoms are often useful in drawing out air high. On certain days they may be wide open, on other days they may be merely cracked. On days when they bring in only hot, unhealthful air from the top of the corridors they should be closed.

Open doors do not usually take out air sewage. They often take out much good air—that near the floor. People occupying rooms near the roof of a tall building sometimes deceive themselves by leaving doors and windows open and get a strong current of air which has the air sewage of the house in it. This very warm air feels cool because of its motion, but it is not fresh nor invigorating, for it has in it the stuff which makes torpor, headache, and susceptibility to respiratory diseases.

King David had his general put Uriah in the front of the battle to get rid of him. If you have an employee you wish would pass out put him in the path of air from an upper corridor rushing towards an open window. Applicants for positions should back away from an offered post where a current of warm air is flowing by from any source, pure or otherwise. It may feel good, but it is unsafe.

The temperature of a room makes or destroys efficiency, health, and sometimes, even life itself. The New York State Commission on Ventilation found that a room temperature of 73 or more produces a fever of one or two degrees average in all the occupants of a room.

Why pay salaries for expert work and dope the employee so he cannot deliver his best? Why hire a healthy man and keep him slightly ill? Why tolerate inexpert work by substitutes when you can reduce absenteeism by reduction of temperature?

Overheated air is bad air. The overworked radiator is the principal cause of illness and stupidity. If you need all the heat the radiator can supply before 9.00 a.m., you do not need half as much after nine.

If a thermostat controls your raidators, have it set low enough to cut off the steam when the room is *almost* warm enough. The radiator stays hot some time after the thermostat shuts off the steam. It often happens that the hot radiator overheats the room and windows are opened so cold air blows on the thermostat and turns on the steam again to make the room hot.

Fresh-air cranks say, "Fresh air never hurt anyone!" They think they must have a breeze blowing on other people in order that they may feel their natural pep. They know not what they do. Nobody should have a draft, day or night, except the chaps who like it. It should not be imposed on others. Because I delight to run out at night stark naked and get pep by diving into the snow bank, I cannot claim the right to duck you similarly.

Too much heat in a room gives such persons some excuse for exploiting their notions. Too much heat compels us to

bring in more cold air than should be admitted. Cold air falls to the floor when you "flush out" a room, and the offensive hot air rises overhead. The sitting ones are down in the cold area, especially the inactive ones who cannot resist a chilling air. They must sit there till the overheat comes down past their heads to their feet. This is exceedingly dangerous.

Get the air right early in the day and keep it so. It is dangerous to try to correct your error while the people are present.

Ventilate your rooms with one or more windows open slightly at the top. If the transom will take air out of the top of the room, use that too. If there is a duct in your room taking air out near the ceiling, use that. If there is one taking "foul air" from the floor, close it off.

Keep temperature low. Sixty-eight degrees is a top limit, if all like it. If they must have more give it to them, but as sparingly as possible, and when they have endured a definite temperature ten days with no violent overheat, they will take a degree or two less. The lower you get it the longer they will live and the better they will do their work. Yes, and the more attractive they will be. Keep them good looking.

A humidifier will help you make a low degree satisfactory. Especially a humidifier which supplies hot vapor or real steam. The humidifiers which make the air soppy with minute water globules are good for the furniture but not for the people.

Throw away the warm air sewage! You have saved it for reuse long enough. It has killed more people than all the wars. It has cost you money that you have never seen. It has prevented proper treatment of customers and clients. It has killed good business. It wants to go out. Why not let it?

Kasper is First Carolina Man to Win McCarter Medal

Rudolph Kasper

AT a recent meeting of the employees of the South Carolina Power Company, Charleston, S. C., a McCarter Medal and Certificate were awarded to Rudolph Kasper, of the Gas Department of the company, by the American Gas Association in recognition of the saving of a human life through the resuscitation of a victim of asphyxiation by the Schafer prone pressure method.

George L. Kornahrens, who assisted Kasper, received a McCarter certificate from the American Gas Association.

The presentation of the medal and certificates was made by M. Rutledge Rivers, a director of the company.

This is the first McCarter Medal to be awarded to a citizen of South Carolina, and the Company is proud of the meritorious service rendered by Mr. Kasper and also Mr. Kornahrens, who assisted him, who by their prompt response for a call for assistance and quick action upon arrival used their training to save a life.

The McCarter Medal is presented by the American Gas Association through the generosity of Thomas N. McCarter, President of The Public Service Corporation of New Jersey.

In Memoriam

LINCOLN BEERBROWER, manager of the northern division of the Oklahoma Gas and Electric Co., with headquarters at Enid, Okla., died recently while in Oklahoma City attending the fifth annual Oklahoma Gas and Electric Co. conference.

Mr. Beerbrower spent 26 years of his life in the utility industry, and nearly 25 years was spent in the Byllesby organization, which owns the Oklahoma Gas Electric Co.

ROBERT W. EGAN, vice-president of the *Oil and Gas Journal,* Tulsa, Okla., died recently at Tulsa.

CHARLES GILBERT FRANCKLYN, one of the organizers of the Consolidated Gas Co. of New York, died recently in New York.

ANDREW A. ARMSTRONG, manager of the northern Pennsylvania division of the United Fuel Supply Co., died in Pittsburgh, Pa., on Dec. 23.

TIDE OF MEN AND AFFAIRS

A. W. Robertson

ANDREW WELLS ROBERTSON, president of the Philadelphia Company of Pittsburgh, has been elected chairman of the board of the Westinghouse Electric & Manufacturing Company.

Mr. Robertson will resign as head of the Philadelphia Company and his other business activities to devote his entire time to the Westinghouse company. His headquarters for the present will be in Pittsburgh.

Mr. Robertson is 49 years old. He was graduated from Allegheny College in 1906 and from the Pittsburgh Law School in 1910. He joined the Philadelphia Company as counsel soon after leaving college and was elected president in 1926.

WALKER W. STEPHENSON has been appointed assistant to the President of the Consolidation Coal Co., 15 Broad St., New York, N. Y. Mr. Stephenson has done extensive work as a consulting combustion engineer, and has also been associated in various executive capacities with the Semet-Solvay Co.

MICHAEL BELKA, of the Haverhill Gas Light Co., Haverhill, Mass., is now district representative supervisor with the Lowell Gas Light Co., Lowell, Mass.

C. H. MANCHESTER, President of the Providence Gas Co., Providence, R. I., has been reappointed as a Class C Director of the Federal Reserve Bank of Boston, Mass.

EARL ERNSBERGER has resigned as president and general manager of the Southwestern Light & Power Co., Oklahoma City, Okla. Mr. Ernsberger is a past president of the Oklahoma Utilities Ass'n.

THE American Meter Company has announced the appointment of R. W. McClenahan as assistant manager of the Helme & McIlhenny factory, Philadelphia.

Mr. McClenahan was graduated from Princeton University in 1924, with the degree of Bachelor of Science. In 1926, after two years of study in the Mechanical Engineering Department of the Towne Scientific School, University of Pennsylvania, Mr. McClenahan took a position with American Meter Company to specialize in measurement engineering.

C. A. DALLY, general manager of the Reserve Natural Gas Co., Shreveport, La., is now general manager of the Penn-Ohio Gas Co., at Pittsburgh, Pa.

MARK PENDLETON, vice-president and general manager of the Pennsylvania Gas & Electric Co., York, Pa., has been made vice-president and general manager of the Sioux City Gas & Electric Co., Sioux City, Ia., and the Iowa Public Service Co., Waterloo, Ia. All of these companies are subsidiaries of Stevens & Wood, Inc.

Mr. Pendleton is now president of the Pennsylvania Gas Association.

CHARLES O. SCHOBEL, assistant to superintendent, Spring Gardens plant, Consolidated Gas Electric Light & Power Co. of Baltimore, Md., was recently elected president of the Baltimore Gas and Electric Association.

WILLIAM H. HODGE, vice-president in charge of advertising, Byllesby Engineering and Management Corp., Chicago, Ill., is now a member of the Executive Committee of the Advertising Commission of the International Advertising Association.

Mr. Newhall

BLACKWELL NEWHALL has been elected assistant secretary of The United Gas Improvement Co., filling a vacancy created several months ago when Johns Hopkins was advanced to the post of secretary of the company.

Mr. Newhall had been special assistant to the vice-president in charge of finance. He became associated with The U. G. I. Company in January, 1927, and previously had been assistant power engineer of The Philadelphia Electric Company. Mr. Newhall is a graduate of the United States Naval Academy and Pennsylvania State College. Following his graduation from the Naval Academy he served as an ensign on the battleship West Virgina.

THE American Light and Traction Co. have announced the removal of their offices from 120 Broadway, New York, N. Y., to Suite 220, Bankers Building, 105 West Adams St., Chicago, Ill.

The company will maintain an office at 120 Broadway, New York, for transfer of stock, etc.

Affiliated Association Activities

The Ohio Gas and Oil Men's Association

SECRETARY WILLIAM H. THOMPSON is shaping up the plans for the annual convention of his Association to be held in Columbus, Ohio, March 5 and 6, 1929.

The tentative plans call for registration on the morning of March 5; a meeting at 1:30 in the afternoon at which time President John J. McMahon will deliver his address, the Secretary will read his report of the Association's activities and one paper will be delivered. Then there will be held meetings of the distribution, production, and accounting sections.

The banquet with entertainment will be held on the evening of March 5.

Another general meeting will convene on the morning of March 6 to be followed in the afternoon by a continuation of the sectional meetings. It is expected that H. C. Cooper of Pittsburgh will speak at the convention on a subject to be announced, and R. M. Conner, director of the A. G. A. Testing Laboratory, will describe the work of the Laboratory.

Oklahoma Utilities Association

PRELIMINARY arrangements have been made for the eleventh annual convention of the Oklahoma Utilities Association at the Huckins Hotel, Oklahoma City, March 12, 13, 14. Attendance is expected to reach 1000, representing the electric light and power, gas, electric railway, telephone and manufacturing, jobbing and supplying branches of the industry.

Principal committees have been appointed by President L. W. Scherer as follows: Convention—E. F. McKay, chairman; Exhibits—O. D. Hall, chairman; Hostesses—Mrs. J. M. Gayle, chairman; Reception—Glen Kiley, chairman; Entertainment and Dance—M. A. Sanders, chairman.

Several of these committees have already met and made arrangements for some of the principal features of the convention. General sessions, division meetings, the annual reception and ball, and several special luncheons will be held at the Huckins Hotel. Arrangements have also been made for a limited number of exhibit rooms and booths on the parlor floor of that hotel. The annual banquet and entertainment will be held in the new banquet room of the Oklahoma City chamber of commerce, Commerce Exchange building, and about 600 are expected to attend. Special entertainment features will be provided for the banquet and also will be included in the general sessions of the convention.

The Oklahoma Utilities Association is composed of six divisions: Electric Light and Power, Gas, Telephone, Electric Railway, Manufacturers and Suppliers, and Public Relations. Each of these divisions will hold separate meetings in addition to participating in general sessions. Not only will leading executives and experts of the utility industry be included on the program of general and division sessions but provision will be made for general discussion of subjects presented. Arrangements are being made to secure several speakers of national reputation to present various phases of utility management and operation from the national viewpoint. It is the object of officials of the Association to give those attending the Oklahoma convention some of the advantages they would obtain by attending the big national utility meetings.

Southern Gas Association

THE arrangements are already being made for the convention of the Southern Gas Association to be held in Memphis, Tenn., Tuesday, Wednesday, and Thursday, April 23, 24, and 25. The Peabody Hotel has been designated as official headquarters, and delegates are advised by Secretary J. P. Connolly to make reservations at once.

The Technical Committee, under Chairman Daniel H. Levan, has held several meetings where plans were made for the technical sessions of the convention. The Commercial Section, Geo. H. Schlatter, chairman, is working hard to surpass the 1928 commercial sessions. The executive committee of the Association at a meeting last July organized an Accounting Section with Marion M. May as chairman. Mr. May is directing the preparation of the convention program of the new section.

Pennsylvania Gas Association

THE annual meeting of this Association has been scheduled to be held in the Benjamin Franklin Hotel, Philadelphia, April 10 and 11, 1929.

New Jersey Gas Association

THE annual meeting of this Association will be held at the Stacey-Trent Hotel, Trenton, N. J., on Wednesday and Thursday, April 24 and 25, 1929. A banquet and entertainment will follow the business session on the evening of the first day.

Pacific Coast Gas Association

EXECUTIVE SECRETARY CLIFFORD JOHNSTONE announces that the annual convention of the Pacific Coast Gas Association will be held at Del Monte, California, starting on September 10, 1929, and running through September 13.

A mid-winter Technical Conference of this

Association is being planned early in March while the annual Northwestern Conference will be held early in June in Victoria, British Columbia.

Indiana Gas Association

THE 1929 annual meeting of the Indiana Gas Association will be held in Gary, Indiana, May 1 and 2.

Indiana Public Utilities Association

A SHORT course for women employed in the utility industry in Indiana and adjoining states will be held at Purdue University, Lafayette, Indiana, on March 26, 27, 28, 29.

Dean Mary L. Matthews, School of Home Economics of the University, is in charge. The Dean is being assisted by a committee of the Indiana Public Utilities Association. This committee is making suggestions as to the features with which the short course shall be concerned and is also assisting in the building of the programs.

New England Gas Association

ARRANGEMENTS are well in hand for the convention of the New England Gas Association to be held at the Statler Hotel, Wednesday and Thursday, February 6 and 7. The morning session on February 6 will include announcements by President G. W. Stiles, report of the Board of Directors, reports of Executive Secretary C. D. Williams and the treasurer, address of welcome by Lieutenant Governor W. S. Youngman, nominating committee report, election of officers and directors, greetings from the American Gas Association, and presentation by past president William Gould of the Governor's Cups to gas companies leading in merchandising sales. In the afternoon session B. H. Gardner, Columbia Gas & Electric Co., will present a paper on "Increased Output through Water Heater Sales," and Nils T. Sellman, Consolidated Gas Co. of New York, will present one on "Large Volume Water Heating."

A paper "Recent Developments in the Gas Industry and Their Application to Practice," by C. J. Ramsburg, vice-president, The Koppers Company, Pittsburgh, and another on "The Distribution System in Boston" by P. J. Lâfore, superintendent of distribution, Boston Consolidated Gas Co., will be presented at the morning session on February 7. The program for the afternoon session is being arranged.

During the convention there will be a luncheon under the auspices of the home service directors at which there will be talks on the laboratory and oven canning, the latter by Miss Dorothy E. Shanks. A theatre party is being arranged for the ladies under the guidance of Mr. and Mrs. DeWitt Clinton, who so successfully arranged a similar affair last year. A large registration is expected at the convention which, judging from hotel reservations already made, will exceed 650.

J. H. Sumner

At the regular dinner meeting of the Sales Division of the Association, held January 11 at Boston, presided over by M. B. Webber, retiring chairman, James H. Sumner was elected chairman. Mr. Sumner, Cambridge Gas Light Co., has served his company 28 years as engineer, as water gas foreman, as superintendent, and finally as sales manager. He is also vice-president of the Cambridge Rotary Club and is active in civic duties. John J. McKearin, of Lowell, was elected vice-chairman.

E. H. Schell, Professor of Business Management, Massachusetts Institute of Technology, was the guest speaker. Professor Schell's topic was "Making a Living During a Period of Change." He said in part that business and social conditions are now changing very rapidly, in fact almost faster than it was possible to analyze them either as to actuality or trend. A man expecting to make a living out of selling or in any other general activity at the present day must be keenly alive as to what is going on about him and take advantage of every opportunity to study the conditions in which he is placed. He must study his own capabilities, Prof. Schell said, and how to apply them to the conditions under which he has to work.

Other officers just elected in the New England Gas Association are R. D. Washburn, auditor, Massachusetts Lighting Co., chairman Accounting Division; Burton Smart, vice-chairman; and Otto Price, secretary.

T. F. Piser, Welsbach Co. of New England, chairman of the Manufacturers Division; J. D. Taylor, sales manager gas division, Walker & Pratt Range Co., vice-chairman; J. H. McPherson, New England representative, Clow Steam Radiator Co., secretary-treasurer.

The chairman of the Industrial Division is L. B. Crossman, sales manager, industrial division, Boston Consolidated Gas Co.; L. E. Wagner, Providence Gas Co., is secretary-treasurer.

The Operating Division elected as chairman I. T. Haddock, vice-chairman, Cambridge Gas Light Co.; A. S. Hall as vice-chairman, and H. G. Taylor as secretary-treasurer.

NATURAL GAS DEPARTMENT

S. W. MEALS, Chairman H. C. MORRIS, Vice-Chairman

E. J. STEPHANY, Secretary

Department Selects Committees to Handle Big 1929 Convention

T. J. Strickler

S. W. Meals

F. M. Rosenkrans

A. W. Leonard

IF competent committee personnel can accomplish anything, the annual convention of the Natural Gas Department of the American Gas Association, to be held at Kansas City, Missouri, May 6-9, will be the largest and best meeting ever held by the natural gas industry. Already the various convention committees are appointed and are hard at work on respective assignments.

Because the past year has been a record-breaking one for the natural gas industry, it is to be expected that the 1929 convention will eclipse anything held heretofore. The particularly rapid growth of the Southwestern section, together with the inauguration of natural gas service in several large cities, are the high marks of the year. These developments and everything else pertaining to natural gas will be provided for in the program for the Kansas City meeting the week of May 6.

Kansas City will be especially attractive to natural gas men because it is in the heart of a large natural gas territory. The convention and hotel accommodations of the city are excellent. All in all there is every indication of a large attendance and a most successful meeting.

Samuel W. Meals, chairman of the department, has announced the following committee appointments:

Convention sessions will be held in this adequate and well-appointed theatre

PROGRAM COMMITTEE

A. W. Leonard, Devonian Oil Co., Tulsa, Okla.

N. C. McGowen, The Palmer Corp., Shreveport, La.

F. L. Chase, Lone Star Gas Co., Dallas, Texas.

T. H. Kerr, Ohio Fuel Gas Co., Columbus, Ohio.

Major T. J. Strickler, Kansas City Gas Co., Kansas City, Mo.

H. C. Cooper,

Peoples Natural Gas Co., Pittsburgh, Pa.

T. R. Weymouth, Oklahoma Natural Gas Co., Tulsa, Okla.

Eugene Metz, Metric Metal Works, Kansas City, Mo.

W. H. McKenzie, Wyandotte County Gas Company, Kansas City, Kan.

H. L. Montgomery, Empire Companies, Bartlesville, Okla.

H. C. Palmer, Iroquois Gas Corp., Buffalo, N. Y.

ENTERTAINMENT COMMITTEE

Major T. J. Strickler, Kansas City Gas Company, Kansas City, Mo.

Paul C. Ford, Kansas City Gas Company, Kansas City, Mo.

T. H. Barton, El Dorado, Arkansas.

T. R. Weymouth, Oklahoma Natural Gas Corporation, Tulsa, Okla.

L. B. Denning, Lone Star Gas Company, Dallas, Texas.

(Continued on page 118)

Natural Gas
The Clean House-Heating Fuel
Yes! You Can Use Natural Gas
Your Present Heating Plant
With Natural Gas You Can Fire Your Furnace
A Continuous Supply of
NATURAL GAS
Is Assured For Memphis Consumers
MEMPHIS
The Natural Gas pipe line now being constructed from the Monroe fields will assure an adequate and continuous supply of this fuel for Memphis consumers.
The capacity of this line is 60 million cubic feet daily, or approximately 21 billion cubic feet per year—which is about 14 times the present total consumption in the city.
We confidently expect greatly increased demand for gas as a fuel for commercial, industrial and house-heating purposes—but the severest demands that may arise in years to come are c vided for in the buil lins.
You can plan to ha or operate your factory gas, in complete assur adequate supply w mously available of a valve.
The New Factor—
in Making Memphis a Cleaner and Bigger City
NATURAL GAS!
ATTRACTS Industries
AIDS Real Estate Development
IDEAL for Householding
NATURAL GAS The Ideal Fuel
For Water Heating
For Cooking
For Room Heating
EVERY Burner
EVERY GAS APPLIANCE must be adjusted
TURAL GAS
nces Being Listed
Questions? and Answers! —about
NATURAL GAS
The Ideal Fuel
THE MEMPHIS PUBLIC
EMPHIS
LIGHT CO.

Memphis people learned of the advantage of natural gas service and of the facts about the turning on of natural gas through such excellent advertising as that shown here

Memphis Joins the Natural Gas Ranks

By PAUL RENSHAW

NATURAL gas, from the Monroe, La., fields, was turned into the distribution mains of the Memphis Power & Light Company on Dec. 30.

The line from the fields was built and will be operated by the Memphis Natural Gas Co., organized a few months ago for this purpose. It is entirely separate from the Memphis Power & Light Co., to which it delivers the gas in Memphis for distribution.

Construction of the line was accomplished in 92 working days. It is 210 miles in length, 18 in. in diameter, and when operated at 300 lbs. pressure, will deliver to Memphis approximately 60,000,000 cu.ft. of gas per day. It crosses the Mississippi river a few miles below Greenville, and passes near by a number of important towns of the state, including Leland, Cleveland, Clarksdale, in addition to Greenville. Cleveland is being served by the line, gas having been turned on there on Jan. 2.

Memphis gets natural gas—showing digging, laying pipe, and removing old packing on a main

Preparations had been thoroughly made by Memphis Power & Light Co. for turning the gas into its mains. Advance cards of a distinctive color were prepared for mailing to all consumers. For facilitating the conversion of the system, the city was districted into four zones, which received the gas numerically in order. The cards, giving instructions to gas users, were delivered into district one on Saturday prior to turning gas into the mains serving the section on Sunday; and workmen began adjusting appliances in the area on Monday following.

About 8246 services in this area had been adjusted by Thursday of the same week, and the workmen moved into the second zone, into which the gas was turned on Friday afternoon, Jan. 4, cards of instructions having been delivered the previous day. Other areas remain to be converted at the time of this writing, although company officials estimate the work will be completed not later than January 19. The company serves approximately 33,000 gas customers.

In preparation for the conversion, also, the company revamped its distribution belt line mains, calking all joints of these mains with hard-twisted jute and rubber packing sealed with cement. Old packing was burned out with acetylene torches and the new packing introduced. Effort to remove the packing by specially designed machines did not prove satisfac-

Mr. Renshaw is advertising manager of the Memphis Power & Light Co., Memphis, Tenn.

In the laboratory men are learning to make adjustments on water heaters

tory when tried, and acetylene torches were used principally.

Advertising by the distributing company was begun as soon as negotiations for building of the pipe line were completed, and the effort was directed along the lines of selling the idea of natural gas as a fuel for domestic, commercial, and industrial purposes. During the three months the line was under construction, advertisements appeared in all daily papers regularly each week. Company officials express satisfaction with the results of the advertising, saying that customers throughout the city have indicated a kindly reception to the new fuel.

Advertising during the period of the conversion incorporated maps of the city, giving boundaries of district zones. Other advertising carried requests for the company that customers cooperate by being at home when workmen in the areas were at work, so as to avoid return calls for making adjustments. Other advertisements indicated how the customers might know when natural gas reached their homes.

The distributing company, which also furnishes electric light and power service to the community, will use natural gas under the boilers of its electric plant. A special 12-in. main was built direct from its distribution station to the electric plant and is to be operated at 50 lbs. pressure. This will be the largest customer in the city.

Newspapers of the city gave liberal space, both in news columns and editorials, in supplementing announcements by the company's advertising at the time of introducing the gas. Company officials were in demand by luncheon clubs to explain how it might affect the convenience of customers, what its advantages in use might be, etc.

He Took His Furnace With Him

A New Convenience in House Heating

Last winter, whenever he left his house, he took his furnace with him! He didn't actually walk out with it under his arm, but he might as well—for it was constantly on his mind.

When he went to the office in the morning, he wondered if it would be warm when he got home again. In the evening when he went to the "movies," he worried about its ability to hold heat during his absence. He dreamed about it at night and dreaded to face it in the early morning hours. He really had a furnace complex.

But This Winter He'll Leave His Furnace Worries at Home

NATURAL GAS

Will Take Over the Job of Heating His House

MEMPHIS POWER & LIGHT CO.

A fine house heating advertisement

Southwest Meeting

(Continued from page 70)

high peak loads during the summer for domestic users and hardly any industrial load. His companies set about developing the industrial load and now the latter is in excess of the domestic load in the summer.

Mr. Chase said he had found the "priority service" plan the best basis for fixing rates in his locality. His company has five rates, the one having priority over the other, so that the highest rate obtains for the consumer the highest guarantee of delivery and uniformity. The consumer using the fifth rate has no guarantee, he pointed out. The first rate is for industries which must have gas and can afford to pay for protection, while the fifth rate is for those who do not wish to pay high rates and are willing to use gas without assurance that they will have it at all times, he said.

E. L. Rawlins, of the United States Bureau of Mines, reviewed open flow by pressure methods. The speaker attacked the open flow method of testing, and explained the cost of lost gas. He advocated determining capacity of wells by pressure conditions rather than open flow. This paper was discussed by Donald E. Fuelhart, of Shreveport, Walter Reid, of Dallas, Chester L. May, of Dallas, and C. P. Parsons, of Cyril, Okla. Mr. Fuelhart presented by means of lantern slides charts showing the capacities of wells in Louisiana and Texas fields by the pressure capacity curve method. The other speakers also told of the advantage of methods other than the open flow.

William F. Chisholm, director of the minerals division of the department of conservation of the State, joined the discussion to say that many operators are now bringing in their wells through one and one-quarter inch tubing, without leaving them wide open to the atmosphere for checking.

The only woman on the program was Miss Lois Upshaw, advertising manager

RESOLUTIONS

THE following resolutions were passed at the meeting of the Southwest Division, Natural Gas Dept.:

RESOLVED, That it is the sense of the conference of the Southwest Division of the Natural Gas Dept. that the problem of research to determine the capacity of natural gas wells without waste of gas is deserving the attention and support of the entire organized industry, and we recommend this problem to the attention of the department.

RESOLVED, by the Southwest Division of the Natural Gas Dept., that we commend the commercial sales educational efforts of the American Gas Association to the favorable attention of our companies.

RESOLVED, that the Southwest Division of the Natural Gas Dept. realizes the need for uniformity in classifications of natural gas accounts, and suggests the creation of a committee to further this course throughout the Industry, reporting to the Managing Committee and to the annual meetings of the department.

RESOLVED, that in view of the fact that the Southwest is now the heart of the nation's natural gas production and in consideration of the importance of this great industry to this section and to the country at large, that it is the sense of this conference that every effort be made to keep the Southwest Division intact, that we build up the organization of the Division, and that we continue the annual conventions of the Division with increasing efforts to expand the scope and usefulness of these meetings.

RESOLVED, that the thanks of the conference are due and are hereby extended to the Palmer Corporation of Louisiana, the Arkansas Natural Gas Corporation and other local gas companies, who have been our generous hosts, for their hospitable reception and entertainment, to the Shreveport Press for their fair, cordial and generous attention to our meeting, to the trade press for their cooperation in giving publicity to the convention, to the Hon L. E. Thomas, Mayor of Shreveport, and the Rev. James Owens for giving us so abundantly of their valuable time in opening the meeting, to William F. Chisholm and his associates of the Louisiana Conservation Commission for their enthusiastic support of the meeting, and to all others who have contributed to the success of the meeting.

of the Dallas Gas Company, who told of some of the unique and successful advertising methods of the company. Her talk, enlivened by sparkling humor, was instructive and entertaining. It was discussed by Keith Clevenger, of Bartlesville, Edward F. McKay, of Oklahoma City, and Dr. Hugh M. Blain, of New Orleans.

A paper, prepared by Joe Zeppa and E. N. Watkins of the Arkansas Natural Gas Corp., Shreveport, was read by Mr. Watkins. It dealt with uniform classification of accounts, calling attention to the serious lack of such uniformity in natural gas companies and recommending a study of the subject by an appropriate committee. Mr. Zeppa is leaving the Arkansas Natural to take up employment at Los Angeles and for this reason the paper was read by Mr. Watkins, general auditor of the Arkansas Natural.

H. C. Otis, also of the Arkansas Natural, read an interesting paper on "Proper Casing and Tubing of Wells," which was followed by a moving picture on the same subject presented by W. C. Andrus, of Houston, Texas.

The final session on Tuesday afternoon, January 15, was a joint meeting of the Southwest Division and the Louisiana section of the American Society of Mechanical Engineers, with Ray McGrew of the Standard Pipe Line Company presiding. A learned paper on "Economic Problems of High Pressure Gas Transmission," prepared by P. McDonald Biddison, consulting engineer of Monroe, La., was read by J. L. Foster of the Lone Star Gas Co., of Dallas. Mr. Biddison was called to New York and was unable to return in time for the meeting. This paper was followed by a moving picture showing the process of manufacturing seamless line pipe.

Secretary William C. Grant presented a report on the Southwest Division, giving many interesting facts about the early history of gas in Texas and relating progress made in recent years. He said that since 1927 over 200 cities had been furnished with natural gas for the first time since their foundation and he commented on the fact that New Orleans, one of the first American cities to have artificial gas, was one of the last cities in the Southwest to be furnished with natural gas. Considering the future of the Southwest, he said that his only recommendations were that the locality be more heavily populated to take better advantage of such ideal fuel situations and that industries should be heartily encouraged to enter the region.

Mr. Grant was in charge of the publicity for the meeting.

The entertainment feature of the convention was supplied by a barbecue and a wrestling match at the Louisiana State Fair Grounds for which the delegates were indebted to the gas companies of Shreveport. There were numbers of small luncheons during the convention.

The committee on papers was headed by Elmer F. Schmidt of Dallas, as chairman, and Edward F. McKay, and W. C. Grant, members. The committee on arrangements was composed of N. C. McGowen, Shreveport, chairman, and B. M. Mowery and D. R. McWilliams, both of Shreveport.

Mrs. Luella M. Fisher, of Erie, Pa., chairman of the Home Service Committee of the American Gas Association, was introduced to the convention and made a brief speech. Mrs. Fisher, who represents the Eriez Stove and Manufacturing Co., is working in Texas at present.

A. W. Thompson Resigns from U. G. I.

ON the ground that his continued ill-health does not warrant his again undertaking the arduous duties which the administration of the office involves, Arthur W. Thompson has presented to the Executive Committee his resignation as president of The United Gas Improvement Company.

The filling of the vacancy in the office of president will not be considered for the present, but the executive function will continue to be exercised by John E. Zimmermann, chairman of the Executive Committee under the arrangements which were previously announced.

ACCOUNTING SECTION

F. H. PATTERSON, Chairman J. L. CONOVER, Vice-Chairman

H. W. HARTMAN, Secretary

Accountants Will Hold Spring Conference

SINCE its organization ten years ago, the activities and committee work of the Accounting Section have shown a steady growth both in amount and importance of the activities carried on. It has become increasingly difficult in the time afforded at the annual conventions to give adequate consideration and discussion to the various reports submitted thereat.

As this is a growing problem, the Managing Committee of the section at the organization meeting this year decided to adopt the policy in effect in several other sections of holding a Spring Conference of the Section for the detailed consideration and discussion of the committee reports and other activities under way. Accordingly, the following Program Committee was appointed:

Edward Porter, *Chairman*, Philadelphia Suburban Counties Gas & Electric Co., Philadelphia, Pa.

J. J. Armstrong, Consumers Gas Co., of Toronto, Toronto, Ont., Canada.

H. C. Davidson, Consolidated Gas Co., of New York, New York, N. Y.

E. B. Nutt, Peoples Natural Gas Co., Pittsburgh, Pa.

W. A. Sauer, The Peoples Gas Light & Coke Co., Chicago, Ill.

This committee was charged with the duty of considering the character of material to be presented both at the annual sessions of the Accounting Section, and at the Conference of the Section to be held in the spring. The above committee has held one meeting, as a result of which it has been decided tentatively to hold the Conference of the Section on Thursday and Friday, March 21 and 22, and in the program for the Conference to stress particularly full discussion of the committee reports at present under way.

The Section desires that all accounting members appreciate the importance and value that can be obtained from attending the Conference. Considerably more time will be available for the discussion of the detail of the work, and a strong effort will be made to bring out subjects of actual moment to the members in their daily work.

A complete program for the Conference will be published in the next issue of the A. G. A. MONTHLY. It can be said at this time, however, that the program will probably include progress reports of the following committees:

Joint Committee with the Commercial Section on Merchandise Accounting—H. C. Davidson, Chairman.

Committee on Fixed Capital Records—C. E. Eble, Chairman.

Committee on Credits and Collections—J. G. Waddick, Chairman.

Presentation by E. P. Prezzano, Chairman of the Committee on Relations with Customers, entitled "Getting and Keeping Close to the Customer."

Presentation of the Committee on Functions of the Auditor—D. H. Mitchell, Chairman.

Progress Report on Office Personnel—H. B. Bergen, Chairman.

While the place for holding the Conference has not yet been definitely decided by the committee, Chicago, Ill., has been selected tentatively.

The considerations of the Program Committee involve a decision to have the program of the Fall convention in Atlantic City deal largely with papers and addresses, and this will involve a reduction at least in the number of committee reports considered thereat. It is, therefore, hoped that a good attendance can be had at the Conference where the detail of these reports will be discussed.

A Note on Modernizing the Gas Range

BY F. W. E.

MUCH has been done during the last few years to beautify and increase the utility of the gas range. There appear, however, to be some features in gas ranges which are equally subject to improvement, but which the manufacturer needs more than ordinary persuasion to adopt.

We have all noticed the smooth clean linings of an electric oven or broiler. All of the oven walls are easily cleaned, there being no grooves or recess corners which are not only difficult but impossible of thorough cleaning.

There is no reason why the ovens and broilers of gas ranges cannot be greatly simplified. One type of oven rack which accomplishes this purpose is available but has to this time received very little consideration from any range manufacturer. Satisfactory self-latching gas cocks are available in numerous designs, and this feature is also difficult to introduce as part of standard equipment.

The fact that many of these improvements are patented devices unquestionably retards their adoption. However, it is much better for the industry if manufacturers incorporate the improvements in their factory-built products, rather than expecting the improvements to be added to stoves already installed in homes. If an article is worth selling as an addition to a gas range, it most certainly is worthy of incorporation in the original stove. The result will be more satisfactory and the cost to the customer less.

Changing to Natural Gas

(Continued from page 74)

Four pipelines, supplying natural gas to Muskegon and Muskegon Heights, were in operation by early January this year. On Jan. 16, they were taking between 11,000,000 and 12,000,000 cu.ft. a day from the field. They expected to increase this to 15,000,000 cu.ft. by the end of January, and to 18,000,000 cu.ft. a day when the load is fully developed. The field "proved" up to Jan. 16 covers about three square miles. Geologists estimate that the 18,000,000 cu.ft. a day drag upon it will soon exhaust it, possibly within a year or two years.

So just at present Muskegon's standing as a "natural gas city" is a matter of hope and of doubt. There is nothing of certainty in the situation.

Smoke Fighting

(Continued from page 76)

business concerns, at the rate of approximately 25 to 50 per day:

"Dear Sir:

I am writing to ask if you would care to aid in the campaign to 'free New York from smoke.'

Public sentiment and appreciation of the damage to health and property caused by the smoke nuisance is the only way New York can put a stop to this recurring evil.

As a contribution to this movement, the Consolidated Gas Company has created the attached sticker, to be used on local correspondence and forms. It contains no advertising of any character whatever.

We will be glad to supply these stickers to you in limited quantities free of charge. Or, if you can use more, we will arrange to have them printed for you at actual cost.

A number of concerns have already joined in this plan. We would appreciate also having your opinion of its effectiveness.

Let us know how many stickers you will require."

At present, we are only in the first classification of "accountants," but already we are receiving grateful expressions of interest. One correspondent writes, "If I said what I thought about it,—well! Why is not the law enforced? Send me as many stickers as you can."

The cost of such an activity is ridiculously small, while the publicity resulting in the personal contacts which the gas company receives is invaluable, in the judgment of the writer.

This is only one way of tackling the situation. Our work in motion pictures and public speaking takes advantage of the theme at every opportunity. Perhaps other gas companies have new and interesting ways of emphasizing their leadership in this important movement. If so, I am sure the A. G. A. MONTHLY would be glad to extend, in this direction, its extremely useful function of helping the gas industry to exchange information which helps us all to fortify ourselves and our service in the consciousness of the public.*

* The A. G. A. MONTHLY is only too glad to be of service in the manner indicated by Mr. Obermeyer.—Editor.

PUBLICITY AND ADVERTISING SECTION
E. FRANK GARDINER, Chairman JAMES M. BENNETT, Vice-Chairman
CHARLES W. PERSON, Secretary

Novel Coke Advertising Display Created

By W. G. RICH

THE entrance to our plant is located on one of the main road arteries to and from the city of Providence, and thousands of persons pass by every twenty-four hours. To impress "Providence Domestic Coke" on the minds of these people, the thought of constructing a "huge heater" was considered and it was found feasible to install such a heater beside the road facing the plant.

The "boiler" which won the attention and admiration of passersby

Our operating department is to be given full credit as the entire installation was made by our own mechanics. The heater is made of wood and sheet metal. The cast iron of boiler is painted black; and the parts of boiler which are covered with insulating material are painted mill white. Actual valves, steam gauge, and gauge glass are used.

The feed door is constantly kept open, and through this door a bed of coke is shown, giving every appearance of coke burning. This feature is cleverly arranged by diffusing yellow, red and blue electric lights. The results are so realistic that from the road it is impossible to tell that it is not coke actually being burned.

The interest shown by the public was especially keen. Hundreds have followed the construction of this heater, making inquiry from time to time, as to "what it is, what's it going to be used for," and upon its completion, they expressed astonishment. Many automobiles have stopped, and people in them have walked up to the furnace to get a close view, and also to determine whether or not the fire in the furnace was real.

Many humorous remarks have been made. One man stopped an employee of the company and asked him "when he coked up the furnace." The questioner had passed at many and different times of the day and night, and yet "he never saw anyone stoking the furnace." Another man stated that he "had been fooled by the fire in the furnace, thinking that it was an electric fire, until he got out of his automobile and had a close view of it."

From "a road side form of advertising," this heater has attracted the attention of a bill-board advertising company. Its manager stated that it was one of the best novel advertising displays he had ever seen and he added that such advertising should be worth $250 a month.

The heater is placed on a platform about three feet above the ground. It

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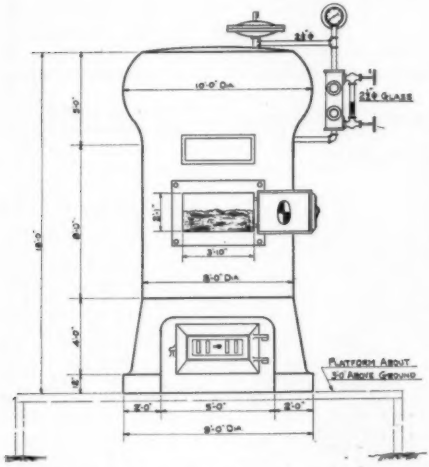
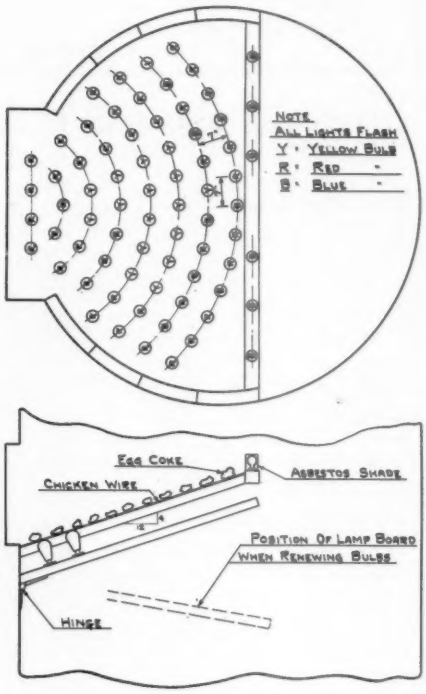
Mr. Rich is manager of the Coke Sales Department of the Providence Gas Co., Providence, R. I.





The two drawings here show the construction of the boiler

is 18 feet high and 10 feet in diameter, and is the biggest thing of its kind in the world. The sides of platform are painted white with the phrases "Coke Satisfies" and "Order Today" placed in a panel. At night the panel is lighted in red with a Neon light.

In addition to the platform being lighted, two "spot lights" have been placed at an angle on either side, and the light from these is played upon the heater at night. The darkness of night in the background and the volume of light thrown on heater give a very conspicuous effect, and no one, unless blind, can pass without noticing the entire display.

The illustrations shown here give a general idea of the construction of the heater and also of the arrangement of electric lights. The pictures speak for themselves.

Possibly some gas companies who produce a domestic coke may have a space of ground near their plant. Such piece of ground could not be put to a better advantage than in creating some advertising feature of this sort. It will cause unusual interest and talk, and this is especially desired. If you get the public interested and talking about your product, it makes it easier to talk to them in using coke in their home for already they will have been deeply impressed with the aggressive advertising.

Safety Council Presents Resuscitation Medals

SEVENTEEN applications for the President's Medal have been approved by the Medal Administration Committee of the National Safety Council, bringing the total number of awards to 23.

This medal is awarded by the Council to those who restore to consciousness by the Schaefer prone pressure method of resuscitation victims of electrical shock, gas asphyxiation, drowning, or other accidental cause of suspended respiration. Any person ten years of age or over is eligible to receive the President's Medal, except those who are qualified to receive the Insull Medal awarded by the National Electric Light Association, or the McCarter Medal, awarded by the American Gas Association.

MANUFACTURERS SECTION

H. LEIGH WHITELAW, Chairman F. G. CURFMAN, Vice-Chairman

C. W. BERGHORN, Secretary

The exhibition will be housed in the large Convention Hall

Space Available for Natural Gas Exhibit

THE 1929 exhibition of equipment and appliances, to be held in conjunction with the convention of the Natural Gas Department of the American Gas Association at Kansas City, Mo., May 6 to 9, will be one of the largest and most comprehensive shows ever put on by the natural gas industry. Initial interest that has been shown in the exhibition warrants the belief that records established at the Dallas convention last May will be broken.

With the Convention Hall in Kansas City as the scene of the exhibit, the industry can rest assured that adequate space will be available for all exhibitors. The exhibition prospectus is now in the hands of the manufacturers and already space reservations are being made. In view of this all manufacturers are requested to place their orders immediately to avoid disappointment. The allotment of space will be made sometime in March.

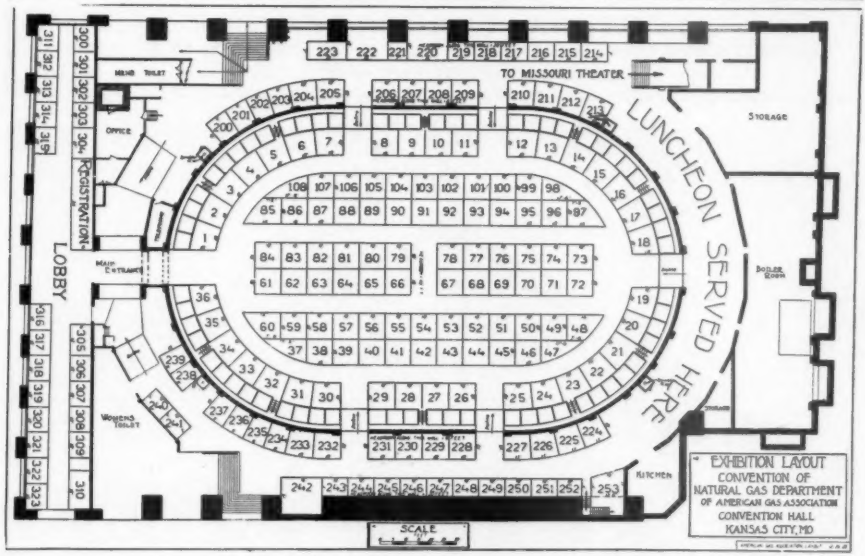
Space for open air exhibits of large equipment is being provided directly across the street from the main entrance of the Convention Hall. Since the Convention Hall is across the street from the Missouri Theatre where the convention sessions will be held, natural gas men can rest assured that everything possible is being done to provide for the promotion of the best natural gas meeting ever held. The convenient arrangement of the meeting place and the exhibit hall is but one of the many features.

Since it has been seven years since the natural gas men have met in the Kansas section of the country, manufacturers are all anxious to exhibit in this center of natural gas development. It affords the exhibitors an opportunity which has seldom been equalled.

The personnel of the Exhibition Committee which is handling the exhibits is as follows:

F. M. Rosenkrans, chairman, The Gas Service Co., Kansas City, Mo.

O. T. Dawson, National Supply Co., Tulsa, Okla.



Layout of booths for Natural Gas Dept. exhibition at Kansas City

W. E. Derwent, Geo. D. Roper Corp., Rockford, Ill.

N. A. Newton, Oklahoma Natural Gas Corp., Tulsa, Okla.

E. F. Schmidt, Lone Star Gas Co., Dallas, Texas.

Fred B. Thomas, The C. & G. Cooper Co., Mt. Vernon, Ohio.

H. Leigh Whitelaw, American Gas Products Corp., New York, N. Y.

C. R. Zeskey, Pittsburgh Equitable Meter Co., Kansas City, Mo.

C. W. Berghorn, Director of Exhibits, A. G. A., New York, N. Y.

Georgia Company Issues Booklet

THE Public Relations Department of the Georgia Power Company has just issued an attractive folder containing advertisements which the company is running in several nationally circulated magazines, calling attention to Georgia as a suitable location for various industries.

Safety Congress Will Be Held in Chicago

THE Eighteenth Annual Safety Congress will be held in Chicago from September 30 to October 5, inclusive, according to Managing Director W. H. Cameron.

General headquarters will be established at the Hotel Stevens.

During the six days of the Congress approximately 150 sessions will be held. It is predicted that at least 7000 safety workers will be present.

Department Selects

(Continued from page 108)

F. M. Rosenkrans, The Gas Service Co., Kansas City, Mo., is chairman of the Exhibition Committee. The personnel of this committee is given on another page in this issue.

Arthur Booth, of the Pittsburgh Supply Co., Pittsburgh, Pa., is chairman of the Transportation Committee.

With this splendid committee personnel, it is apparent that the 1929 convention arrangements are in good hands. The natural gas men can only believe that the meeting will be one which no one can afford to miss.

Plans for the exhibition have already been made, as announced elsewhere in this issue of the MONTHLY. Every effort is being made to have the exhibit of appliances and equipment truly representative of this rapidly growing industry.

The convention sessions are to be held in the Missouri Theatre and the exhibition will be housed in the Convention Hall which is a short distance away.

INDUSTRIAL GAS SECTION
J. P. LEINROTH, Chairman C. C. KRAUSSE, Vice-Chairman
C. W. BERGHORN, Secretary

Servicing Industrial Appliances Important

By ALBERT LEECH

TO many industries gas is particularly essential and incomparable, being adaptable, clean, economical, and easily controlled. In this important branch of our business, the maintenance and adjustment of the appliances must have the services of the most capable men.

Through the medium of our inspectors, the company provides a gratuitous service to industrial customers, giving them dependable advice or making minor adjustments.

Ordinary periodical or seasonal calls are made at frequent scheduled intervals or in keeping with the requirements of the particular industry using the appliance, the various industries being listed, classified and filed for reference at the shop and main office.

Preference is given to all new customers, or where the gas has been turned on or the business has been turned over, by making immediate calls so that their equipment may be put in shape for their requirements by alterations, additions or adjustments, thus giving them a good start in their undertaking. These timely calls are much appreciated by the customer and make friends for the company. Special calls are also made at the request of the customer to remedy any defect or unsatisfactory operation of a gas appliance or suggest suitable improvements.

The qualifications of an industrial inspector are many and varied. He should be courteous, tactful and diplomatic, have a comprehensive knowledge of the company's policies. Having to deal with business men he should be a business man in vocabulary and conduct, be able to plan, measure or supervise the installation of piping or any gas appliance, and have the mechanical ability to submit plans for constructing, repairing or altering the fabrication of any industrial gas appliance.

In other words, he is a specialist in the utility of gas.

There is unlimited scope for the use of gas by industries in the present and future. Gas is not only doing good work in the progress and the changes that take place in the many industries, but is ready to fall in line and do its part in almost every new business that is created.

Mr. Leech is with the Portland Gas and Coke Co., Portland, Ore.

Sales Spirit Depends Upon Attitude of Executives

From *Iron Age*

A SALESMAN'S spirit is best maintained by his superior's interest and appreciation of his success. Eliminate too severe criticism, but never go without allowing him to realize that his shortcomings are understood. Every man needs help, not only from his superior, but from his colleague. Convince your personnel that he climbs highest who helps the other most. The moment you find any of your regulations pitting one man against another, charge yourself double before you allow sales energy to be wasted between your own men in conflict.

If two men have worked on a contract overextend yourself to credit them with it. Your money cost will be repaid many times by the increase in your salesmen's spirit. Industrial management depends more upon management of men than of machines.

Men develop best under strain. They must have problems and they must meet them with the understanding that work is the cornerstone of real happiness. Many times this strain may be of such a character as to cause your men temporarily to misunderstand. Many men stake their jobs upon a single act or decision. They should be corrected every time they approach the breaking point.

Recognition can be accomplished by individual quota, prize contests, personal letters and visits from executives, salary increases and promotion in the form of added responsibilities. Prize contests are splendid individual and group in-

centives. They can be staged between organizations or different communities with the sales opportunities equalized by means of quota and with prizes given to individuals or those teams, departments or offices who within any given period of time, days, weeks, months, or quarters, excel in sales success over their opponents.

Chief executives should personally correspond with the men on the firing line to have their minds influenced by the state of mind of the one who is most vitally in touch with the company's problems. Periodical visits also prevent the local sales manager's viewpoint from being distorted by his closeness to the problems and the broad company's viewpoint can be understood only by personal contact with the leading spirit. It is impossible for any chief executive to visit any local manager without that manager confessing that he has gained new viewpoints.

Company prestige should be maintained at all costs. Men should not be allowed to influence customers from a personal relationship but rather because personally they represent the best organization and the best products. It is a tremendous handicap for a salesman to have a customer feel that he is dealing with him in spite of his dislike for his company.

Training Workers

(Continued from page 90)

Production favored over instruction
More trained instructors required
Learner sequence may be overlooked
More difficult to control practices taught

Conditions Justifying Centralized School Training

Where a group requires the same training at the same time
Where training in advance of production is necessary
Where the number of instructors is seriously limited
Where service interruptions, etc., cannot be tolerated

There are available several agencies for carrying on training on the job. The first line supervisor on the working job might do all of the instructing, or he might delegate some of it to one of his subordinates, or it might be accomplished by an instructor reporting to a staff organization or, where gang effort is necessary, a group might be organized entirely for instructional purposes and receive instruction on the job.

A careful analysis of the advantages and disadvantages of the above agencies should be made by any organization. When the circumstances listed for each agency below exist this agency may be considered the best one to do vocational training on the job.

1. *The Working First Line Supervisor*

a. Where a high type of supervisor is available
b. Where the supervisor has his job well enough organized to take the load of training

2. *Fellow Workmen Reporting to First Line Supervisor*

a. Where the foreman is unable to assume the load of training
b. Where the foreman is sympathetic and willing to have such an instructor
c. Where there are available sufficient number of prospective instructors

3. *Instructor Reporting to the Staff Organization*

a. Where the number of prospective instructors is seriously limited
b. Where short courses are to be given to widely separated groups or individuals
c. Where nearly perfect coordination between line and staff is possible
d. Where neither foreman nor any of his group is available for instructional work

4. *The Special Instructing First Line Supervisor*

a. Where production is dependent upon gang effort or is fairly well concentrated
b. Where pressure is placed on production and no interference can be tolerated
c. Where the number of instructor prospects is limited
d. Where the training program is being inaugurated and a smooth easy start is desired

There are a few fundamentals which must be kept in mind that often prove their worth in setting up a program.

A—Training never can be of more importance than production.

It is only a means for improving production and must justify itself in increased effectiveness of workers.

B—Teaching and learning are basically simple, natural common sense processes. They always should be considered from the learner's viewpoint.

C—There are basic principles which apply in teaching that make learning more certain. Instructors should be trained in the use of these principles.

D—Out of sound vocational training will come the solution of many employment problems.

COMMERCIAL SECTION

G. M. KARSHNER, Chairman G. E. WHITWELL, Vice-Chairman
J. W. WEST, Jr., Secretary

Mid-West Sales Conference Will Be Held In Chicago, February 14-15

PLANS have been definitely formulated for the Third Annual Mid-West Regional Gas Sales Conference to be held at the Hotel Sherman, Chicago, Ill., February 14 and 15. It is fully expected that this conference will set the same high standard of practical value that previous Mid-West Sales conferences have established.

The 1929 conference program will consist of addresses and discussions on the most successful sales plans developed during the past year and there is every indication that this Conference will be even more successful from the Commercial man's viewpoint than have the splendid conferences held in the past.

A record attendance is predicted since Chicago is the central point of the states represented — Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, and Wisconsin.

At the two-day Conference, those attending will hear speakers talk on the follow subjects:

Selling Storage Water Heaters.
New England's Cooperative Regional Advertising Campaign.
Selling House Heating—Both Gas Designed and Conversion.
Merchandising Ranges in Large and Small Towns.
Selling Gas Refrigeration.

The important topic of water heating sales will be discussed from the standpoint of continuous selling with regular sales force, continuous selling with water heating specialists, and semi-annual campaigns with regular sales force.

While it is impossible at this time to print the final program, it can be announced that the speakers have all been selected because of the outstanding records established by their companies during the past year. No one not directly connected with the gas industry will appear on the program, and therefore the papers and discussions will be devoted to actual experiences and definite sales plans.

F. X. Mettenet, Northern Indiana Public Service Co., Hammond, Ind., is chairman of the Midwest Regional Sales Council; H. L. Brown, The Peoples Gas Light & Coke Co., Chicago, Ill., is Regional Secretary, and C. A. Gould, The Peoples Gas Light & Coke Co., is Assistant Regional Secretary.

Southern Conference

(Continued from page 94)

Chattanooga Gas Co.—"Ruud Autohot Campaign."
Georgia Power Co.—"Neglected Kitchen Week."
New Orleans Public Service, Inc.—"Friday the 13th. Sales of Gas Ranges."

The author stated that there are four essential elements in putting over a campaign of any particular gas appliance, namely:

Special values.
Special terms for payment.
Exploitation through advertising.
Enthusing the sales force.

Mr. Plummer also said:

"There has been a marked trend during 1928 toward selling higher class merchandise throughout this section, with certain exceptions where additional load has been secured by selling price specials, notably water heaters. It has been noted hardly with exception that on replacement business, the sale of high-class merchandise has greatly increased."

The afternoon session opened with an address by W. A. Hudson, industrial gas engineer, Birmingham Electric Co., on "Organizing and Operating an Indus-

trial Gas Department and Its Advantage to the Gas Company." Mr. Hudson emphasized the importance of industrial business since the South is now on the threshold of great expansion and development. This paper will be printed in the March issue of the A. G. A. MONTHLY.

"Home Service as an Aid to Selling," was the title of the next address, presented by A. J. Goss, vice-president and general manager, Chattanooga Gas Co.

In the speaker's opinion, home service as an aid to selling is absolutely indispensable. He outlined the major objectives of a home service department as: 1, to develop better public relations; 2, to sell more gas; and 3, to sell more appliances.

Mr. Goss also explained in detail two activities of the home service department of the Chattanooga Gas Co., namely, a cooking class for colored people, and an employment bureau maintained in conjunction with this to secure positions for the women when they had been trained.

"Gas Refrigeration" was the title of an address by J. F. Roach, of Servel, Inc., New York, N. Y.

What About Home Ownership?

(Continued from page 86)

That is why I say that our interests are mutual. For many years now I have been advocating an ideal which simply is "Every family a home-owner; more comfort and convenience in every home, and better quality of living in every family circle."

We must put our shoulders to the wheel and insist upon a return to the old Anglo-Saxon ideal of a detached house for every family, and it is only in a detached house that that family can wholly and completely work out its individuality as such.

We have a very serious choice of policy to make, so far as the American ideal of family life is concerned. It seems to me that we are right to the cross-roads, and I want to do what I can to enlist the support of those of you on the manufacturing side to bring about a return to this old Anglo-Saxon tradition.

The other policy or ideal is what might be referred to as a Mediterranean ideal of the tenement and the apartment—in other words, multiple living of families under one roof.

I know it is very easy sometimes to think that it would not be so bad after all if families were to go in for the apartment ideal of living. Sometimes, when we secure a big order from an apartment project, we are tremendously thrilled and pleased, but suppose we stop and consider and analyse the thing for a moment. Let us take the highest type of living possible under that idea; let us take a cooperatively owned apartment where there is every appointment that modern ingenuity can contribute to make each family contented and comfortable, what have you got? Suppose you are a manufacturer of roofing materials. You have just one roof over the heads of all those families, perhaps there are 100 families in that apartment. You can easily see that if they were persuaded to go into detached houses you have 100 chances to the one you now have in interesting them in a bill of your material. At any event, as it now stands, only one manufacturer will provide materials for that particular roof.

You have standardized materials almost throughout, and, while you may have two or three kinds of floors, due to the special insistence of particular tenants, the rule is for standardized floors throughout.

Now, suppose you persuade these people that the old Anglo-Saxon ideal of a detached house is the best, because of the advantages we all extensively recognize. What happens? You have vastly multiplied your market; you have rendered a contribution on the social side of tremendous significance, and you have the prospect before you of a constantly increasing and expanding market in the future, due to the need for replacement which, it seems to me, we cannot afford to ignore.

TECHNICAL SECTION

HARRY E. BATES, Chairman B. V. PFEIFFER, Vice-Chairman
H. W. HARTMAN, Secretary

Distribution Engineers to Meet in Boston April 3-4-5

F. M. GOODWIN, chairman of the Distribution Committee, after obtaining the votes from some seventy members of the committee, has announced that the choice is overwhelmingly for Boston as the location for the annual Distribution Conference in 1929. The dates set are Wednesday, Thursday, and Friday, April 3, 4, and 5, and the place will be either the auditorium of the Boston Consolidated Gas Company or the Statler Hotel.

All of the distribution engineers have come to look forward to their annual conferences as the high point of the year's work. The Executive Committee of the Distribution Committee is at present hard at work on a program that will insure a bigger and better conference than ever. While it is not possible at this time to print the program in detail, the following subcommittees have been organized and will report fully or in part at the Conference:

The Distribution Portable Equipment Committee, of which C. S. Goldsmith, The Brooklyn Union Gas Co., is chairman, have decided for the present year to confine the work to obtaining costs from a number of typical companies who will agree to submit these costs based on the standard classification formulated by the Accounting Section.

The Committee on Pipe Coatings and Corrosion of which J. K. Crowell, Westchester Lighting Co., is chairman, have been granted an appropriation by the Executive Board of $10,000 to conduct research into pipe coatings and the effect of soil conditions. Preliminary consideration had led to the recommendation that this research be coordinated with the work of the research fellow of the American Petroleum Institute and the investigation which the Bureau of Standards is conducting into soil corrosion. Negotiations for obtaining a research fellow at the Bureau of Standards to handle the following program of research are under way:

1. Develop, evaluate and standardize methods of testing coatings. This to include the development of a method of determining the changes in physical characteristics of coatings under conditions to which they are subjected.
2. Check laboratory tests with field experience by means of coated samples buried in representative soil classes.
3. Make inspection of coatings already applied to pipe lines in urban territory only.

It is hoped to have a good start on this work by the time of the Distribution Conference.

The Subcommittee on Pipe Joints, O. S. Hagerman, American Light and Traction Co., chairman, was also granted an appropriation of $25,000 to conduct research and tests on all types of joints. This committee also promises two papers on oxyacetylene welding and a paper on electric welding for the Distribution Conference.

These committees are practically completing their plans for the research which should be well under way at the time of the Conference.

The Subcommittee on Meters, W. H. Bettle, The Public Service Electric & Gas Co., chairman, will this year give consideration not only to tin meters and cast iron meters but to larger types of meters used for industrial work as well.

The following subcommittees are working on subjects assigned by the committee that is making an economic and engineering survey of the gas industry:

Assignment "A"—Distribution design for house heating loads having particular reference to conversion of low pressure system to intermediate pressure system. Joseph Lucena, of Philadelphia, is chairman of this subcommittee.

M. I. Mix, The Peoples Gas Light & Coke Co., will have available for the Conference a paper on "Unaccounted For Gas," which will analyze the various factors entering therein.

L. A. Kirch, of the Midland Utilities Co., is chairman of the Committee on High Pressure Transmission of Gas, which is working primarily this year on the following program:

1. Economies to be obtained by using various types of prime movers and pumping machinery.
2. Benefits to be derived from exhaust steam in connection with water gas plants.
3. Main costs on transmission lines.

A special subcommittee has also been appointed to make a report on methods of testing meters. C. C. Atwood, The Brooklyn Union Gas Co., is chairman of this committee.

As usual the Conference will also have an Open Forum. The members are especially interested in this feature of the Conference as indicated by the vast number of subjects suggested for discussion thereon. Subjects suggested to date include such as the following:

1. Dust troubles and corrective measures, involving dust traps, oiling, etc.
2. Consideration of fitting shop practice.
3. Metering gas in and out of high pressure transmission systems.
4. Copper tubing for gas services.
5. Servicing of house heating installations.
6. High pressure metering for industrial gas.
7. Operation and maintenance of various types of high pressure holders.
8. Effect of dehydration on meter and governor diaphragms, etc.

OUR NEW MEMBERS

GAS COMPANIES

The Rocky Mountain Gas Co., L. M. Kiplinger, Sec.-Treas., Box 1079, Casper, Wyoming.

MANUFACTURER COMPANIES

The Boyle-Daton Co., F. E. Dayton, Pres., 5190 Santa Fe Ave., Los Angeles, Cal.

Comfortaire Manufacturing Co., Geo. Ehletzet, Pres., 311 Edwards Bldg., Cincinnati, O.

Sexton Stove Mfg. Corp., A. B. Poor, Sec'y, 500 Block West Conway St., Baltimore, Md.

ACTIVE MEMBERS

Bracy, Joseph S., Suburban Gas & Electric Co. 150 Beach St., Revere, Mass.

Barton, T. H., Arkansas Natural Gas Corp., El Dorado, Arkansas.

Willett, W. M., Western United Gas & Electric Co., Aurora, Ill.

Smith, M. D., Western United Gas & Electric Co., Aurora, Ill.

O'Connell, J. W., Western United Gas & Electric Co., Geneva, Ill.

Schmeiser, A. E., Western United Gas & Electric Co., Aurora, Ill.

Meyer, L. C., Western United Gas & Electric Co., La Grange, Ill.

McOwan, K. A., Western United Gas & Electric Co., Joliet, Ill.

Tobin, H. H., Western United Gas & Electric Co., Aurora, Ill.

Killam, W. S., Independent Gas Cock Co., Jonesville, Michigan.

Lacombe, Charles F., 11 W. 42nd St., New York, N. Y.

Travis, John F., American Gas Furnace Co., Elizabeth, N. J.

Lewis, George C., Columbian Carbon Co., 45 E. 42nd St., New York, N. Y.

Wandas, Harold, The Peoples Gas Light & Coke Co., 122 S. Michigan Ave., Chicago, Ill.

Deal, Perley H., Michigan Federated Utilities, Plymouth, Michigan.

Williams, Duncan B., Carbide & Carbon Chemicals Corp., 30 E. 42nd St., New York, N. Y.

Miller, C. W., Consolidated Gas Co., 125 E. 14th St., New York, N. Y.

Gallagher, C. F., Consolidated Gas Co., 124 E. 15th St., New York, N. Y.

Mazzola, J. J., Consolidated Gas Co., 125 East 14th St., New York, N. Y.

Lindsey, Elroy M., The Peoples Gas Light & Coke Co., 122 S. Michigan Ave., Chicago, Ill.

Setrun, O. M., Phillips Petroleum Co., Bartlesville, Okla.

Meredith, Howard J., Seaboard By-Product Coke Co., Kearny, N. J.

Hoyt, William L., American Radiator Co., 4th & Townsend Sts., San Francisco, Calif.

Schalek, J. H., Peoples Natural Gas Co., 545 William Penn Way, Pittsburgh, Pa.

Cairns, James H., Carnegie Natural Gas Co., Pittsburgh, Pa.

McBride, P. W., Arkansas Natural Gas Corp., Shreveport, La.

Stacey, R. A., Arkansas Natural Gas Corp., El Dorado, Ark.

Harris, David W., Arkansas Natural Gas Corp., P. O. Box 1734, Shreveport, La.

Dickerson, H. R., Arkansas Natural Gas Corp., Shreveport, La.
Zeppa, J., Arkansas Natural Gas Corp., Shreveport, La.
Curran, R. W., Arkansas Natural Gas Corp., Shreveport, La.
Ryan, William T., Philadelphia Suburban Counties Gas & Elec. Co., Jenkintown, Pa.
Ryan, John J., Public Service Co. of Colo., Denver, Colo.
Otto, Ralph D M., Public Service Co. of Colo., Denver, Colo.
Mitchell, Henry A., Public Service Co. of Colo., Denver, Colo.
Matthews, Elmer E., Public Service Co. of Colo., Denver, Colo.
Mackell, O. L., Public Service Co. of Colo., Denver, Colo.
Shober, Pemberton H., Westmoreland Coal Co., Philadelphia, Pa.
Logan, N. S., Philadelphia Suburban-Counties Gas & Electric Co., Norristown, Pa.
Burrell, W. A., Gannett, Seelye & Fleming, Inc., Harrisburg, Pa.
Thomson, Geo. H., Stanton-Thomson Corp., 2 W. 45th St., New York, N. Y.
Trexler, J. F., Iowa-Nebraska Light & Power Co., Lincoln, Nebr.
Dixon, Helen, Mrs., Northern Union Gas Co., 310 E. Kingsbridge Road, New York, N. Y.
Brooks, Frank H., Iowa-Nebraska Light & Power Co., Lincoln, Nebr.
Hellmers, Charles C., Iowa-Nebraska Light & Power Co., Lincoln, Nebr.
Flieger, W. B., Iowa-Nebraska Light & Power Co., Lincoln, Nebr.
Hough, C. A., Southern Counties Gas Co., 810 S. Flower St., Los Angeles, Calif.
F. Marion Chelf, Public Service Co. of Colo., Denver, Colo.
Berg, Theodore E., The Mgt. & Engrg. Corp., 327 S. La Salle St., Chicago, Ill.
Max Asher, Sears Roebuck & Co., 925 So. Homan Ave., Chicago, Ill.
Lee John W., Arkansas Natural Gas Corp., El Dorado, Ark.
Ellerbrock, Gilbert G., Consolidated Gas Electric Light & Power Co., Baltimore, Md.
Owens, Geo F. B., Boston Consolidated Gas Co., Everett, Mass.
Robinson, T. Russell, North Shore Gas Co., 1 State St., Boston, Mass.
Howard, Alice L., American Gas & Electric Co., New York, N. Y.
Bergen, Harold B., Henry L. Doherty & Co., 60 Wall St., New York, N. Y.
Webster, R. D., Webster & Southbridge Gas & Elec. Co., Southbridge, Mass.
Donovan, J. F., Standard Gas Equipment Corp., 18 E. 41st St., New York, N. Y.
Williams, R. J., Central Hudson Gas & Elec. Corp., 50 Market St., Poughkeepsie, N. Y.
Derry, Harold W., Pennsylvania Power & Light Co., 9th & Hamilton Sts., Allentown, Pa.
Garvin, Ray, Monongahela West Penn Public Service Co., Fairmont, W. Va.
Harr, G. W., Monongahela West Penn Public Service Co., Fairmont, W. Va.
Keighorn, E. L., Monongahela West Penn Public Service Co., Fairmont, W. Va.
Bussard, Robert M., Missouri-Kansas Pipe Line Co., 820 Dwight Bldg., Kansas City, Mo.
Longre, Thomas B., Brown County Gas Co., Brownwood, Texas.
Treen, George V., Bailey-Treen Machinery Co., Huntington, W. Va.
Wagoner, Zimmerman C., Atlantic Gas Co., 313-19 Lewis Bldg., Philadelphia, Pa.
Clark, John A., Jr., Public Service Elec. & Gas Co., 250 Main St., Orange, N. J.
Donahue, Eugene J., Jr., Public Service Elec. & Gas Co., 535 Ogden St., Newark, N. J.
Thord-Gray, Edward, Consolidated Gas Co., 408 E. 111th St., New York, N. Y.
Owen, John W., Central Florida Gas Corp., Winter Haven, Fla.
Horlers, Edward, The Canadian West. Nat. Gas Light, Heat & Power Co., Calgary, Alberta, Canada.
D'Spain, Howard G., Amory Natural Gas Co., Amory, Miss.
Fisher, Geo. T., General Gas Light Co., 44 W. Broadway, New York, N. Y.
Shallenberger, George G., Kay County Gas Co., Ponca City, Okla.
Sheehan, John B., Sheehan Pipe Line Cons't Co., 322 Wright Bldg., Tulsa, Okla.
Whitehead, J. Earl, United Gas Improvement Co., 1401 Arch St., Philadelphia, Pa.
Wilson, Don M., Ohio Fuel Gas Co., 99 N. Front St., Columbus, Ohio.
Moore, Clarence O., Stamford Western Gas Co., Stamford, Texas.
Millard, R. B., Southwestern Engineering Corp., 605 Mayo Bldg., Tulsa, Okla.
Mean, J. E., Southern Gas Co., 1500 Milan Bldg., San Antonio, Texas.
Gray, Ralph B., Lone Star Gas Co., Santa Anna, Texas.
Dunn, J. H., Lone Star Gas Co., Dallas, Texas.
Hall, Clarence, 1314 Esperson Building, Houston, Texas.
Hargrave, Allan, Simms Oil Company, Dallas, Texas.
Morgan, Wm. F., Southern Gas Co., 1500 Milan Bldg., San Antonio, Texas.
Nordan, L. A., Southern Gas Co., 1500 Milan Bldg., San Antonio, Texas.
Cook, Ralph L., Southern California Gas Co., Box T, Taft, Calif.
Jamieson, Frank T., The Arco Co., Cleveland, Ohio.
Hicks, Jeff G., Magnolia Gas Co., Box 1027, Ft. Worth, Texas.
Majima, Hiroo, South Manchuria Gas Co., 117 Nishi Dori Dairen, Dairen, Manchuria.
Shimura, Tokuzo, South Manchuria Gas Co., 117 Nishi Dori Dairen, Dairen, Manchuria.
Cooper, Stuart, Philadelphia-Suburban Counties Gas & Elec. Co., Philadelphia, Pa.
Hallock, Frank L., Bronx Gas & Elec. Co., 43 Westchester Sq., Bronx, N. Y.
Wilder, Stuart, Bronx Gas & Elec. Co., 43 Westchester Sq., Bronx, N. Y.
Neill, J. L., Phila-Suburban Counties Gas & Elec. Co., York Road & Sumit Ave., Jenkintown, Pa.

Sucher, C. F., New Haven Gas Light Co., 80 Crown St., New Haven, Conn.
Brill, A. P., Ruud Manufacturing Co., 99 High Holborn, London, England.
Erlach, Paul A., American Gas & Power Co., 120 Broadway, New York, N. Y.
Aasness, C. B., Black Hills Utilities Co., Rapid City, S. Dakota.
Fargo, Edward I., West Boston Gas Co., Framingham, Mass.
Crane, Wm. M., Standard Gas Equipment Corp., 18 E. 41st St., New York, N. Y.
May, Chester L., Community Natural Gas Co., Dallas, Texas.
Deshong, Howard, Phila-Suburban Counties Gas & Elec., 16 E. 5th St., Chester, Pa.
Price, Jacob B., Municipal Gas Company, Box 986, Wichita Falls, Texas.
Heffner, LeRoy W., Rainey-Wood Coke Co., Inc., Sledeland, Pa.
Staley, Howard P., The U. G. I. Company, Broad & Arch St., Philadelphia, Pa.
Dumm, Ben C., 728 Standard Oil Bldg., Los Angeles, Calif.
King, H. O., Standard Gas Equip. Corp., 100 Arlington St., Boston, Mass.
Denny, John M., National Tube Co., 1802 Frick Bldg., Pittsburgh, Pa.

Westchester Lighting Honors W. J. Clark

ON Jan. 21 the officers and department heads of the Westchester Lighting Co., Mt. Vernon, N. Y., honored W. J. Clark, vice-president of the company, on the occasion of Mr. Clark's birthday, at a dinner held at the Scarsdale Country Club, Hartsdale, N. Y.

The occasion also marked the completion of 60 years continuous service in the gas industry by Mr. Clark. Eugene H. Rosenquest, president of the company, presided and presented Mr. Clark with a traveling bag and a traveling kit.

Two representatives of the American Gas Association were the only persons outside of the official "Westchester Family" who attended. These were Oscar H. Fogg, president of the A. G. A., and Alexander Forward, managing director of the A. G. A.

Industrial Sales and Rates

(Continued from page 98)

make the cost of the commodity itself dwindle into comparative insignificance. While this is not so pronounced in the larger high load factor classes of business, the cost of the service element is still important. For this reason calorific comparisons of gas with other fuels do not tell the entire story and, therefore, in selling our service we should know the ins and outs of every industry that uses heat. How, when and where it is used, necessary fuel handling costs, the degree of importance of interruptions to operation and consequent losses. spoilage chargeable to fuel, etc. It is surprising at times to what extent these indirect costs affect the over-all costs and, therefore, their effect on the price which can be obtained for gas.

It is necessary that statements made to the prospective consumer come true in operation. This necessitates keeping in close touch with customers. Installations operating at high pressure require that time-pressure-volume charts be changed at least weekly. Ability on the part of the man changing these charts to periodically check flue gas analysis, take stack temperatures and check burner operation for those industries not large enough to employ competent engineers helps the company selling the gas to make and keep friends. Every industrial customer is a potential friend to the company and when we do not take advantage of this we are overlooking one of our best means of building a good public relationship.

Gas Leads All Fuels

(Continued from page 71)

of the country. Industrial production increased about 2.5 per cent.

It was estimated that freight car loadings suffered a reduction of one per cent in 1928, postal receipts in the larger cities of the country were minus a fraction, and newspaper advertising minus four per cent. In the light of these figures, an exceptionally good showing was made by manufactured gas, for when industry is a little quiet, as it was in the early part of 1928, the demand for fuel must necessarily be lessened. In addition, it should be considered that the year 1928 was warmer than normal over much the greater portion of the country, according to the U. S. Weather Bureau.

The estimated 10 per cent growth by the natural gas industry is particularly gratifying, and bids fair to eclipse records of many years' standing.

Associations Affiliated with A. G. A.

Canadian Gas Association
Pres.—Frank Elcock, Ottawa Gas Co., Ottawa, Ont.
Sec.-Tr.—G. W. Allen, 7 Astley Avenue, Toronto.
Conv., June 13 & 14, 1929, Ottawa, Ont.

Empire State Gas and Electric Association
Pres.—Chas. S. Ruffner, Mohawk Power Corp., Albany, N. Y.
Chairman Gas Section—H. E. Merrill, Republic Light & Power Co., Tonawanda, N. Y.
Sec.—C. H. B. Chapin, Grand Central Terminal, New York, N. Y.
Conv., 1929.

Illinois Gas Association
Pres.—J. A. Strawn, Central Light Co., Peoria, Ill.
Sec.-Tr.—George Schwaner, 305 Illinois Mine Workers Bldg., Springfield, Ill.
Conv., March 13 & 14, 1929, Springfield, Ill.

Indiana Gas Association
Pres.—T. J. Kelly, Northern Indiana Public Service Co., Fort Wayne, Ind.
Sec.-Tr.—F. W. Budd, Central Indiana Gas Co., Muncie, Ind.
Conv., 1929.

Michigan Gas Association
Pres.—F. A. Newton, Consumers Power Co., Jackson, Mich.
Sec.-Tr.—A. G. Schroeder, Grand Rapids Gas Light Co., Grand Rapids, Mich.
Conv., July 1 to 3, 1929, Mackinac Island, Mich.

Mid West Gas Association
Pres.—Louis Stein, Minneapolis, Minn.
Sec.-Tr.—A. W. Schmidt, Des Moines Gas Co., Des Moines, Iowa.
Conv., 1929, Minneapolis, Minn., April 15 17, 1929.

Missouri Association of Public Utilities
Pres.—A. E. Reynolds, Springfield Gas & Electric Co., Springfield, Mo.
Sec.-Tr.—F. D. Beardslee, 315 N. 12th St., St. Louis, Mo.
Conv., 1929, Sedalia, Mo.

New England Gas Association
Pres.—G. W. Stiles, Portland Gas Light Co., Portland, Me.
Exec. Sec.—C. D. Williams, 41 Mount Vernon St., Boston, Mass.
Chairman Operative Div.—Isaac T. Haddock, Cambridge Gas Light Co., Cambridge, Mass.
Secretary Operating Div.—H. G. Taylor, Lawrence Gas & Electric Co., Lawrence, Mass.
Gov. Sales Div.—J. H. Sumner, Cambridge Gas Light Co., Cambridge, Mass.
Pres. Industrial Div.—L. B. Crossman, Boston Con. Gas Co., Boston, Mass.
Sec.-Tr. Industrial Div.—L. E. Wagner, Providence Gas Co., Providence, R. I.
Chairman Acctg. Div.—R. D. Washburn, Massachusets Lighting Co., Boston, Mass.
Sec.-Treas. Acctg. Div.—Otta Price, Boston Con. Gas Co., Boston, Mass.
Chairman Manufacturers Div.—T. F. Piser, Welsbach Co., Boston, Mass.
Sec.-Treas. Manufacturers Div.—J. H. McPherson, 7 Water St., Boston, Mass.
Conv., Feb. 6 & 7, 1929, Hotel Statler, Boston, Mass.

New Jersey Gas Association
Pres.—H. A. Stockton, County Gas Co., Atlantic Highlands, N. J.
Sec.-Tr.—Louis Stoecker, Public Service Electric & Gas Co., Newark, N. J.
Conv., April 24 & 25, 1929, Stacey-Trent Hotel, Trenton, N. J.

Ohio Gas and Oil Men's Association
Pres.—J. J. McMahon, The East Ohio Gas Co., Cleveland, O.
Sec.-Tr.—Wm. H. Thompson, 811 First National Bank Bldg., Columbus, O.
Conv., March 5 & 6, 1929, Columbus, Ohio.

Oklahoma Utilities Association
Pres.—L. W. Scherer, United Telephone Corp., Yale, Okla.
Mgr.—E. F. McKay, 1020 Petroleum Bldg., Oklahoma City, Okla.
Conv., March 12-14, 1929, Oklahoma City, Okla.

Pacific Coast Gas Association
Pres.—C. H. Dickey, Hotel Fairmont, San Francisco, Calif.
Exec. Sec.—Clifford Johnstone, 447 Sutter St., San Francisco, Calif.
Conv., Sept. 10-13, 1929, at Del Monte, Calif.

Pennsylvania Gas Association
Pres.—Mark Pendleton, Pennsylvania Gas & Electric Co., York, Pa.
Sec.-Tr.—Geo. L. Cullen, Harrisburg Gas Co., Harrisburg. Pa.
Conv., April 10 & 11, 1929, Benjamin Franklin Hotel, Philadelphia, Pa.

Pennsylvania Natural Gas Men's Association
Pres.—George W. Ratcliffe, Columbia Gas & Electric Corp., Pittsburgh, Pa.
Sec.-Tr.—E. J. Stephany, Equitable Gas Co., Pittsburgh, Pa.
Conv., 1929.

Southern Gas Association
Pres.—Roy A. Zeigler, Jacksonville Gas Co., Jacksonville, Fla.
Sec.-Tr.—J. P. Connolly, 141 Meeting St., Charleston, S. C.
Conv., April 23-25, 1929, Memphis, Tenn.

Southwestern Public Service Association
Pres.—W. H. Burke, Stone & Webster, Inc., Houston, Texas.
Chairman Gas Section—R. A. McNees, San Antonio Public Service Co., San Antonio, Texas.
Sec.—E. N. Willis, 403 Slaughter Bldg., Dallas, Texas.
No Convention, 1929.

The Public Utilities Association of Virginia
Pres.—A. W. Higgins, Virginia Public Service Co., Charlottesville, Va.
Sec.—A. B. Tunis, 301 East Grace St., Richmond, Va.
Conv., 1929.

Wisconsin Utilities Association
Pres.—C. R. Phenicie, Wisconsin Public Service Corp., Green Bay, Wis.
Exec. Sec.—J. N. Cadby, 432 Broadway, Milwaukee, Wis.
Meetings of Sections.

Eleventh Annual Convention of the American Gas Association
Atlantic City, N. J. **October 14-18, 1929**

Annual Meeting of Natural Gas Department
Kansas City, Mo. **May 6-9, 1929**

Employment Bureau

(Address All Communications to Key Number)

SERVICES REQUIRED

A LARGE GAS COMPANY in an Eastern city wants an industrial gas man of some experience. Address A. G. A.
Key No. 0130.

WANTED. Young man, preferably married, as Manager of Billing and Collecting Dept. Office personnel, including meter readers, consisting of 10. Man experienced in stub accounting preferred. Total gas, electric and water accounts, 14,000. Location, southern New England. Give detailed experience and salary expected. Address A. G. A.
Key No. 0132.

INDUSTRIAL AND HEATING ENGINEER—Midwestern natural gas company just opening new territory in Black Hills, South Dakota, desires technically trained man about 35 years of age with experience in heating and in application of gas to industrial processes and plants to develop industrial, commercial and heating sales. Address A. G. A.
Key No. 0133.

HOUSE HEATING ENGINEER. Midwestern natural gas company just opening new territory in Black Hills, South Dakota, desires technically trained man about 35 years of age with house heating experience to check and service existing furnace installations and to develop and organize such inspection in other towns now served. Address A. G. A.
Key No. 0134.

A HOLDING COMPANY desires to secure the services of a young engineer with four to six years' experience in distribution work, thoroughly familiar with mains and transmission lines. Please state full qualifications in first letter and salary expected. Address A. G. A.
Key No. 0135.

GAS SALES ENGINEER—Experienced in householeating. State complete details as to experience, age and salary desired. Address A. G. A.
Key No. 0136.

MIDDLE WEST gas company in process of developing natural gas properties in North Dakota, South Dakota and Montana has opening in its general office for gas engineer experienced in design of distribution systems, construction and operation of gas properties. About 35 to 40 years of age. Give detailed experience and salary expected in applying. Address A. G. A.
Key No. 0136.

SERVICES OFFERED

CHEMICAL ENGINEER—38 years of age—15 years' experience in water and Coal Gas Plant operation, construction, distribution, and By-Product Plant work, desires connection as Gas Engineer with a holding company, or large individual gas company. Address A. G. A.
Key. No. 265.

WANTED—Position as manager of a small gas company or assistant superintendent of a larger company, by practical man, 36 years old. Married. 12 years' experience including water gas plant operator both high and low pressure, also all branches of distribution. Best of references. Address A. G. A.
Key No. 166.

GAS ENGINEER with twenty years' wide practical experience in the design, construction and operation of coal, water, coke oven, and natural gas plants and distribution systems located in all parts of the U. S. A., is desirous of an opportunity in a similar capacity with consulting engineer or holding company. Experience covers large, medium and small properties. Technical education. Address A. G. A.
Key No. 268.

WANTED—Position as manager of industrial department as well as house heating, commercial, hotel and restaurant work. Now with large company in above capacity. Middle age, good experience and reference. Can handle large job. Address A. G. A.
Key No. 269.

MANAGER OR GENERAL SUPERINTENDENT—25 years' experience in the construction, manufacture, distribution, valuation, public relations, and sales. Both coal and water gas, high and low-pressure. Age 40 and married. Good references. Address A. G. A.

EXECUTIVE, graduate engineer, 15 years' experience, construction, operation, management, mostly electric light and power public utilities. Schooled by a financial leader of the industry, especially in reduction of operating expenses. Knowledge of state regulatory requirements. Would be interested in holding company appointment, preferably salary plus percentage of effected savings per annum. Address A. G. A.
Key No. 273.

OPPORTUNITY to secure services of experienced gas range salesman as representative of manufacturer in Eastern Territory. Knowledge of gas appliances covered by 15 years' experience, both local and traveling. Utility and general trade. Available January 1, 1929. Address A. G. A.
Key No. 276.

GAS ENGINEER. College trained, thirty years old, married and employed at present. Nine years' experience in operation many types and sizes of coal, water, blue and producer gas plants. Address A. G. A.
Key No. 277.

EXPERIENCED CONSTRUCTION ENGINEER and designer with a good technical background and structural steel experience desires to locate in New York or vicinity. Address A. G. A.
Key No. 278.

EXECUTIVE, graduate Mechanical Engineer with 20 years' experience in design, construction, operation and management of Gas Properties. Competent to handle all local affairs, increase business and reduce operating costs. Would like appointment as Manager of small property, or Division Manager or Gas Engineer of close connected group. Age 41. Married. Good references. Address No. 279.
Key No. 279

AVAILABLE—A man who is employed at present as an Engineer at one of the properties of a large holding company. During his ten years in the business he has been cadet engineer, plant foreman and superintendent's assistant in large plants and manager of a small property. Thorough knowledge of water gas operation, high- and low-pressure distribution, and office routine. Technical graduate, 39 years of age. Address A. G. A.
Key No. 280.

ENGINEER with 7 years' experience in gas and electric utility construction, maintenance, operation and accounting, desires new connection as manager, assistant manager, or superintendent of small utility. New England preferred. Address A. G. A.
Key No. 281.

SALESMAN with wide experience, including sales promotion, desires connection as representative for manufacturer. Acquainted with gas companies and dealers in territory from Boston to Washington. Proposition on agency basis for Eastern territory or Pacific Coast also considered. Address A. G. A.
Key No. 282.

MAN with 16 years' experience as manager of two companies in cities of about 100,000 inhabitants, desires connection with similar or smaller company making water gas. In last connection reduced cost of gas in holder 20 cents per M in last four years. Can give best of references. Address A. G. A.
Key No. 283.

GAS DISTRIBUTION ENGINEER. Also fully acquainted with manufacture and utilization. Understands the necessary methods of handling the public and municipal officials. Ready to serve at once. Will go anywhere, if position is permanent. References will be given by district or city or other local and managing companies. Address A. G. A.
Key No. 284.

GAS ENGINEER, college education, with twelve years' experience, first four with Coal Gas & Electric Co., last eight years as manager of small Water Gas Co., desires position as manager or assistant manager of a gas or combination company. Address A. G. A.
Key No. 285.

WANTED—Position as manager in medium sized company. Have had twenty-one years' experience as manager. Am familiar with coal and water gas manufacture. High- and low-pressure distribution. Am considered a good merchandiser. Can go anywhere at once. Address A. G. A.
Key No. 286.

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AMERICAN GAS ASSOCIATION, INC.

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